# Sustainable Food Opportunities for Wellington

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Prepared by

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# Table of Contents

# Table of Figures

# 1.0 Executive Summary

**Research objectives and problem definition**

This research has been commissioned by Wellington City Council to inform the Planning for Growth project and District Plan review, to identify issues and opportunities around embedding sustainable food into the city's land use and urban form as it grows. Strategic work on the food system at WCC currently sits under the *Wellington Resilience Strategy 2016* (Project 6), and the *Sustainable Food Network* work stream.

The aim of this report is to research and analyse the integration of a sustainable food system into the land use and urban form of Wellington in response to three key challenges:

- **Population growth** - Intensification could lead to larger reliance on supermarket chains and further reduce access to sustainable food systems such as community and private gardens as well as locally crafted food products and fresh produce retailers. Reliance on conventional food systems could increase the city's vulnerability and exacerbates risks associated with conventional systems (Section 2.3.1).
- **Earthquake risk** - Seismic risks in Wellington make the conventional food distribution and retail system more vulnerable. Wellingtonians might not have access to fresh food for an extended period if the access routes into Wellington are disrupted. This would impede both the immediate response and the recovery of the city.
- **Climate change** - The conventional food system is one of major contributors to climate change. Climate change is also likely to have social consequences due to increased food prices, which could be partially mitigated with sustainable food systems initiatives.

**Methodology**

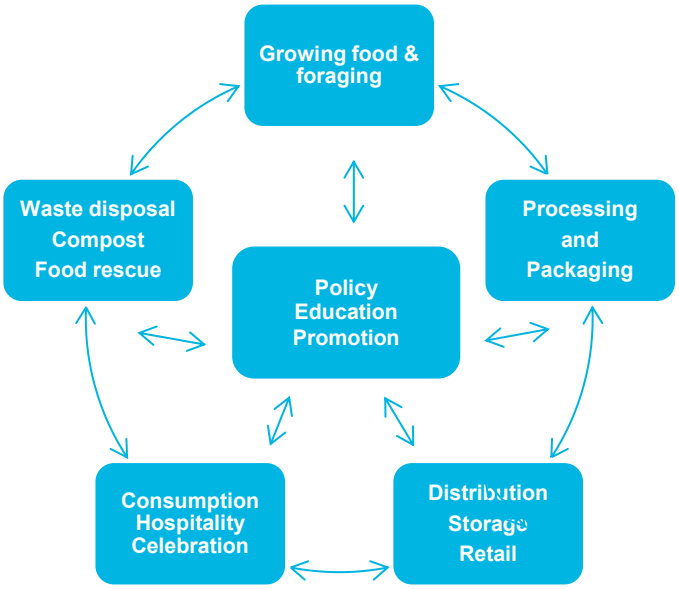
The methodological approach taken for the research and analysis was a collated series of national and international case study examples across five key areas of the food system. The key areas are: Land-Use & Policy (Section 4.1), Developer & Body Corporate (Section 4.2), Council Led Initiatives (Section 4.3), SME & Social Enterprise (Section 4.4) and Community and Volunteering (Section 4.5). A series of interviews with local sustainable food systems professionals were also undertaken – these strived to determine the current state of the Wellington food system.

**Definitions**

Within the context of this research the term **urban sustainable food systems** covers all parts of the food system (see chart below) and encompasses a number of concepts including:

- **Food cycle** – recognition of interconnectedness of all parts of the food system.
- **Environmental responsibility** – it aims for low carbon, water sensitivity, organic and local produce, animal well-being, waste minimisation and sensitivity to native biodiversity.
- **Social responsibility and resilience** - it enhances social cohesion and community resilience, connects people to the food system, encourages healthier food choices, and enhances food security and accessibility.
- **Urban context** - based within the boundaries of the city but acknowledging connections with the peri-urban and regional producers.

**E.1** The Food Cycle




## Business case for investment into urban sustainable food systems

The business case for investing in sustainable food systems, particularly within the context of the Planning for Growth project does not focus on Wellington growing and producing extensive quantities of food within the city limits. Rather, it is about harnessing the **multiple benefits that sustainable food initiatives generate** as illustrated below and in more details in the Section 2.4.

**E.2** Benefits of the urban sustainable food systems mapped against Our City Tomorrow principles

**Compact**

- Local production minimises need for transport
- Food markets and local retail encourage walking and social interactions

**Inclusive + Connected**

- Better access to fresh and healthy food
- Local food production provides opportunity for food education
- Food and social food spaces can be a facilitator of community connections
- Celebrating diversity of food options and culturally appropriate foods

**Greener**

- Potential for food growing spaces multitasking as city green spaces
- Reduced chemical use, waste and GHG emissions associated with more sustainable practices.
- Caring for plants and animals increases sensitivity to native biodiversity

**Resilient**

- Social food spaces can be used as emergency management spaces
- Food related social interactions build community resilience skills and connections
- Growing spaces and irrigation storage are an attenutaion feature preventing flooding
- Urban farming and food processing can supplement healthy and comfort food in emergency
- Urban food distribution hubs provide an alternative distribution networks in emergency

**Vibrant + Prosperous**

- Local innovative enterprises growing, processing and retailing food
- Foodie culture & events enhance the quality of life and support tourism

**Recommendations**

There is already a substantial amount of food related activity in Wellington City (Appendix B), especially in the hospitality sector. Food is a big part of Wellington's culture. Nevertheless, there are still opportunities to further improve the sustainability of our food system and to generate wider benefits for the city. These opportunities include:

- Improving access and affordability of healthy foods.
- Improving resilience of the food distribution network.
- Scaling up economic and social benefits of growing and processing activities.
- Reducing waste and biodiversity hazards associated with food cycles.
- Promoting greater participation from across the community.

**Food Strategy**

The main recommendation of this report is for Wellington City to develop an overarching Food Strategy that would support realisation of the above opportunities across its different functions. During the course of the research it became evident that the cities which have successfully supported the development of the urban sustainable food networks have approached this topic holistically and integrated it throughout the organisation. One of the most relevant food policies found is the Vancouver Food Strategy described in Section 4.1.1. In comparison to the City of Vancouver, Wellington is at the beginning of the process towards building a more sustainable food network. While it has a thriving food scene, Wellington is now striving to increase its food resilience through developing a more comprehensive sustainable food system across the city; focusing not just on growth, but process, distribution, buy and selling, celebrating and education – all things that were catalysed by the Vancouver Food Strategy

An overview of how urban sustainable food systems interact with different aspects of Council policies is provided in Section 3.0.

**Social Food Spaces**

Another key recommendation is for Wellington City to take more deliberate approach to encouraging and creating **social food spaces – multipurpose social spaces that cater for food, recreation and natural environment needs,** spaces where people can interact while participating in the production, distribution or consumption of food.

Intensification is likely to lead to more dense residential development and further restrictions on the availability of private gardens. This could further disconnect people from their food and each other. We argue in this report that social food spaces encourage social connections and activate underused spaces. International examples show that the cultivation can be undertaken at small scale, even as temporary or seasonal undertakings that include on site food processing and consumption.

Christchurch City Council Cultivate programme has been successful in creating those social food spaces through its partnership with LIVS (Living in Vacant Spaces). LIVS acts as a comprehensive brokerage service activating vacant sites and spaces with creative, intriguing and entrepreneurial, temporary projects. Another good example of a policy that addresses the land availability challenge faced by urban farmers is the land-use policy of the City of Atlanta that allows and encourages the utilisation of city green space for urban farming. (Section 4.4)

Examples of social food spaces outlined in this report include:

- Residential developments with communal food growing gardens and agrihoods – residential developments around urban farms (e.g. on ex golf fields) (Section 4.2)
- Shared private gardens (allotments) – leased by council but privately maintained (Section 4.2)
- Green roofs – private, communal or public gardens on private or public buildings, high intensity food production e.g. hydro and aquaponics (Section 4.2)
- Community gardens and community kitchens in council facilities (Section 4.3 and 4.5)
- Small scale initiatives such us street containers or road reserves (community with help from council) and balcony planter boxes (private or body corporate) (Section 4.2 and 4.3)

- Patchwork farming – urban farmers utilising a patchwork of private gardens (Section 4.4)
- Food sharing and food rescue facilities (Section 4.5)
- Farmers markets and distribution hubs for city grown food and collaborative buying (Section 4.3 and 4.5)

An important element of social food spaces are farmers markets, distribution centres and food sharing hubs described in Sections 4.3, 4.4 and 4.5. While at some level they might increase capacity pressures on existing transport networks, they also provides an opportunity for greater efficiencies and increased food resilience. Sustainable food systems are characterised by a greater number of diverse organisations and distribution points. This leads to greater flexibility and ability to respond to unexpected events and emergencies.

While Wellington's farmers markets are already an integral part of the city's landscape, Wellington City Council has no official strategy or plan for the effective management and/or further expansion of the markets to enable access to a greater proportion of the city's population. The City of Portland (Section 4.3) was in a similar situation when they commissioned their study. As a consequence of the study, the City of Portland undertook a number of the recommended actions. This has resulted in the markets now including over 200 individual vendors who sell produce throughout the City from Monday – Sunday on a weekly basis.

Other actions recommended in this report include:

**Policy Focused**

- As part of the District Plan review over the next 2 to 3 years, identify and where possible address potential barriers created by current policies to the development of social food spaces.
- Map existing food initiatives and land/place suitability to identify food deserts and priority areas for development of social food spaces including distribution centres.
- Develop land-use or urban design guidelines to inform and encourage developers to incorporate social food spaces in new builds and refurbishments.
- Review and simplify where possible requirements surrounding small-scale business licensing and permits. Consider special conditions for food related social enterprise.
- Review community space management policies to integrate social food spaces and emergency food distribution aspects.
- Review road design guidance to include provision for edibles in road reserves.
- Review biodiversity management policies in regards to inclusion and maintenance of eatables in public spaces.
- Integrate food growing spaces and their function (water retention/irrigation) into integrated catchment analysis.
- Work with mana whenua to assess their needs in relation to traditional food practices.

**Brokering partnerships**

- Develop partnerships with public and private organisations and companies to make underutilised land available for use in the SFN.
- Maintain a current database of SFN initiatives and connect SMEs and communities with available commercial facilities or like-minded operators and individuals.
- Facilitate partnerships across the food sector to maximise benefits associated with social food spaces e.g. establish a food council.

**Council initiatives**

- Review and initiate new funding and grants for SFN initiatives.
- Incentivise small scale and community food businesses that contribute to social, environmental or economic objectives of SFN e.g. procure and sell locally sourced foods.
- Incentivise (e.g. tax rebates) developers / investors who own/manage underused or negative spaces in central city locations to adopt temporary SFN initiatives.

**Education and promotion**

- Host education workshops and training programmes around growing, harvesting and food processing skills.

- Facilitate management and business mentoring workshops for SFN based initiatives.
- Promote and educate around better food choices and local food availability.
- Develop a biodiversity friendly guide for food growing in Wellington.
- Encourage participation in social food places through communication with social housing tenants.
- Work with mana whenua to learn from and then promote and plant native edible species, and develop safe foraging practices.

**Active participation in the food system**

- Organise or support food exchange and sharing events.
- Expand food collection and composting services provided. Provide training and education about home composting and food rescue.
- Identify and manage edibles in public spaces to make them safe for consumption and non-disruptive for native ecosystems.

# 2.0 Introduction

## 2.1 Research objectives and methodology

This research has been commissioned by Wellington City Council to inform the Planning for Growth work. The project originated from the Wellington Resilience Strategy as Project 6: Sustainable Food Networks. The objective of this report is to provide research and analysis on opportunities to integrate sustainable food systems into the land use and urban form of Wellington city, including:

- Collecting compelling evidence that sustainable food systems are a feasible and viable land use option in Wellington and that it can provide a range of community and resilience benefits.
- Identifying policy instruments that would support development of this land use.

The report was informed by desktop research and interviews with Wellington and wider New Zealand food systems experts. The interviews were used to examine international examples and to test recommendations produced by this report. The list of persons interviewed is provided in Appendix B.

The report is structured in the following way:

- Introduction including definition, problem definition and overview of benefits
- Considerations for Planning for Growth Project
- Case studies for:
  - Land-Use & Policy,
  - Developer & Body Corporate,
  - Council Initiatives,
  - SME & Social Enterprise and,
  - Community and Volunteering
- Overview of the current food system state in Wellington

## 2.2 Definition of urban sustainable food systems

Within the context of this research the term ‘urban sustainable food systems’ encompasses a number of concepts including:

**Food cycle** - it encompasses all elements of the food system: cultivation, processing & storage, distribution & retail, consumption & celebration, waste disposal/ composting as well as the associated policy, education and promotion (see Figure 1). All the key elements of the food system are interconnected. The cycle portrays the journey that food takes, from growth to plate and then disposal. Sustainable food systems aim to reconnect and shorten some of the pathways that are disconnected in conventional food systems.

**Environmental responsibility** – it aims for low carbon, water sensitivity, organic produce, local, animal wellbeing, waste minimisation and sensitivity to native biodiversity.

**Social responsibility** – it enhances social cohesion and community resilience, connects people to the food system, encourages healthier food choices, enhances food security and accessibility.

**Urban context** – based within the boundaries of the city but acknowledging connections with the peri-urban and regional producers.

Figure 1: Elements of a Sustainable Food System


The key actors within a sustainable food system are:

**Council** – setting policies and undertaking educational programmes and even providing some elements of the system as a service e.g. composting, distribution or cultivation.

**Communities and NGOs** – the community and volunteering sector may be involved in initiatives such as community gardens, composting, food sharing and co-operative buying – the primary objectives of these activities will be social or environmental outcomes.

**SMEs and social enterprise** – small to medium sized businesses participate in the sustainable urban food system often in processing and hospitality aspects of the system. They tend to provide premium food to customers who prefer local and organic produce. Some also have social objectives.

**Developers and body corporates** – developers can design new or redesign existing spaces to allow for food related activities such as cultivation, processing and sharing of food. Body corporates would maintain any communal areas either for gardening or sharing of food.

**Tangata whenua** – a special mention should be given to tangata whenua role and models of food systems that are centred around communal preparation and the sharing of food at maraes, as well as cultivation and foraging, especially for kai moana.

**Government agencies (e.g. DHB, MfE)** – setting policy in regards to social and environmental outcomes, producing education materials, funding for NGO and community sector.

This research focuses on the nonconventional and urban approaches to the food systems. No in-depth research was undertaken into the conventional approaches; therefore they have not been included within this report. Nevertheless, it is acknowledged that urban sustainable food systems operate alongside the conventional food system. We recognise that urban sustainable food systems should be focused on diversifying the overall food system and pioneering more sustainable practices.

## 2.3 Problem definition

### 2.3.1 Conventional Food System

Our conventional food system is dominated by large scale intensive farming, global distribution networks and centralised retailers. While it has enabled some of the most widely available and affordable food in the human history, it could be argued that it is also is having a negative impact on our health and environment. While it is acknowledged that the conventional farmers and supermarkets are attempting to minimise their negative impacts, Table 1 below summarises some of the issues presented by this conventional system based on the case studies we have examined and interviews with Wellington experts. **It is argued in this report that urban sustainable food systems can help address these issues, providing greater diversity and being a source of innovation.**

**Table 1:** Conventional Food System Impacts (from interviewees and case studies)

| | **Conventional system** | **Impacts** |
|---|---|---|
| Cultivation | Intensive large scale, agriculture focused on productivity, low prices and how the food looks (so it is more attractive to the buyer) | Water quality – runoff from farms with high animal numbers as well as fertiliser and other agricultural chemicals' application<br>Greenhouse gas – emissions associated with energy use and animal husbandry<br>Food waste – food ending up in the landfill<br>Social hardship – low wages and mental health issues associated with isolation and financial risks<br>Soil degradation – subsequent erosion and water course pollution |
| Processing<br>Storage<br>Packaging | Large scale highly automated manufacturing | GHG emissions associated with processing and storage (energy and refrigerants)<br>Waste – packaging and food waste<br>Social hardship – low wages and physical hardship |
| Distribution<br>Retail | Long distance transportation driven by price and centralised buying power<br>Large supermarket chains | GHG emissions from vehicles (fuel and refrigerants)<br>Ozone depletion from air transport<br>Loss of nutritional value due to long storage<br>Resilience – food availability vulnerable to earthquakes and other disasters<br>Food deserts – accessibility and distance to food retail places<br>Expensive fresh produce and cheap low quality processed food<br>Price driven centralised buying that favours large scale, intensive farming producers<br>Waste – food waste and packaging |
| Consumption<br>Hospitality<br>Celebration | Processed food<br>Fast food outlets | Loss of food preparation skills<br>Health issues associated with highly processed diets |

| | Conventional system | Impacts |
|---|---|---|
| Policy<br>Education<br>Promotion | Advertising by large food brands and supermarkets | Popularity of highly processed foods and negative health outcomes as a consequence |

### 2.3.2 Wellington City Challenges

Wellington City is currently developing an Urban Growth Strategy. The strategy needs to respond to three key challenges:

**Population growth**–up to 80,000 people are expected to move to Wellington in the next 30 years. With the city committed to maintaining its current boundaries the growth will need to be accommodated through intensification.

**Earthquake risk**–Wellington is based on a number of faults and a medium to large earthquake is likely to take place in the future.

**Climate change** – Wellington needs to adapt to sea level rise, increasing wind speed and more intense, less predictable rainfall.

Reliance on conventional food systems both increases the city's vulnerability and exacerbates risks associated with those challenges.

Intensification could lead to larger reliance on supermarket chains and further reduce access to sustainable food systems such as community and private gardens as well as locally crafted food products and fresh produce retailers.

Seismic risks in Wellington make the conventional food distribution and retail system more vulnerable. Wellingtonians might not have access to fresh food for an extended period if the access routes into Wellington and the conventional infrastructure is disrupted. This would impede both the immediate response and the recovery of the city.

The conventional food system is one of major contributors to climate change. Climate change is also likely to have social consequences due to increased food prices, which could be partially mitigated with initiatives such as community gardens and food rescue.

## 2.4 Benefits of a Sustainable Food Systems

### 2.4.1 Resilience

'Develop Sustainable Food Networks' was identified as project 6 in the Wellington Resilience Strategy.

It is not expected that Wellington will ever be able to produce enough food locally to be self-sufficient in an event of an earthquake. If the conventional distribution routes are disrupted, the city will still rely on food supplies delivered by air and sea. However, with limited storage infrastructure and disrupted local roads it is likely that this will be limited to highly processed, durable food and it might be a long time before Wellingtonians will enjoy fresh, high quality food.

However, if we support the growth of the local food industry we might be able to supplement this staple diet with our own local products – fresh fruit and vegetables, fermented salads, craft beers and coffee. This will help keep spirits up in difficult times and consequently support both response and recovery efforts.

The Christchurch earthquake experience (e.g. success of the delivery of cakes initiative in early response stages) shows how important access to good food is in a disaster. Staple foods will keep people alive – to 'survive', while access to locally grown and produced foods will help them enjoy life and motivate them to stay and help rebuild the city – to 'thrive'.

More importantly people who are connected to the food system have better skills to grow and cook some of their own food.

The involvement in growing, processing and sharing food as part of the sustainable food system produces benefits that would increase Wellington's resilience. Food provides an opportunity for social

interactions and increasing social cohesiveness. Neighbours get to know each other so they are better able to help each other in disaster.

Food spaces – community gardens, markets and cafes – are natural places where people can congregate and receive help. Community gardens without vulnerable structures are especially ideal spaces for storing emergency supplies and locating emergency response centres.

Food sharing and alternative distribution schemes will normally only support small sections of society, but in an emergency they could potentially be scaled up and play a significant role.

### 2.4.2 Social benefits

As already highlighted in the resilience section above a local and more inclusive food system generates a variety of social benefits.

Local sustainable food enterprises or community schemes have the ability to reduce the price and improve availability of fresh healthy foods. Participation in local food schemes gives people an opportunity to integrate with their community and pick up food growing and preparation skills. This is especially important to people on a low income and to migrants – who have much experience that the wider community can learn from as well.

Through the activity of caring for plants or animals, people's sensitivity to the natural environment can increase and render them more likely to adopt environmentally responsible behaviours.

Food markets and restaurants are important meeting points. Participation in food related activities, especially gardening, have physical and mental health benefits. Growing spaces can also augment the provision of green recreational spaces in the city.

A wide variety of culturally specific food choices encourage appreciation of diversity and create employment opportunities for low income families, fostering social inclusion.

### 2.4.3 Environmental benefits

Local food production reduces the need for transportation and other energy use associated with storage and distribution infrastructure. This in turn minimises greenhouse gas emissions and associated climate impacts. Shorter distribution networks also reduce the need for using heavy duty packaging and reduce plastic waste.

Allocating larger areas of land to growing food alongside creating new growing spaces in containers or roofs as well as capturing rain water for irrigation, increases water storage capacity. This in turn helps prevent flooding in high intensity storm events.

Organic agriculture reduces chemical use which has both health and wider environmental benefits associated with soil health and the embodied impacts of the chemicals' production.

Sustainable food production also helps reduce waste associated with production and consumption of food either through composting or by using the "ugly" or close to "best by" date produce – either at farm gate or in the shops/cafes. This generates multiple benefits, minimising methane emissions from landfill, reducing land required for landfilling, associated transport emissions and generates supply of affordable but healthy food.

Caring for plants and animals can increase people's sensitivity to natural environment and in turn encourage more responsible behaviours toward native fauna and flora.

### 2.4.4 Economic benefits

The food industry is both a dynamic and innovative aspect of Wellington's economy. Our food scene is a drawcard for tourists and is celebrated in a number of city wide events.

> ***"Of all the places I travelled to, Wellington has the best food scene!"***
>
> *Teva Stewart – Commonsense Organics*

The food industry provides an opportunity for small enterprises to establish themselves both in the centre and outlying residential areas. Small food ventures provide a wider diversity of jobs in the Wellington area, making the city less vulnerable to economic downturns.

Many of Wellington's food ventures such as breweries, coffee roasting and bakeries are innovative and offer high value products that successfully compete with mainstream products.

The business case for growing food within Wellington City itself is not as much about volume or the produce itself but more about health, resilience and social benefits that this activity enables. It is a symbol and a catalyst of many social, economic and environmental benefits.

### 2.4.5 Our City Tomorrow

Sustainable food systems can support the Wellington growth strategy and the principles set out in the Our City Tomorrow project and now adopted by the Planning for Growth project. Figure 2 below outlines the connections between these principles and a sustainable food system for Wellington.


**Compact**

- Local production minimises need for transport
- Food markets and local retail encourage walking and social interactions

**Inclusive + Connected**

- Better access to fresh and healthy food
- Local food production provides opportunity for food education
- Food and social food spaces can be a facilitator of community connections
- Celebrating diversity of food options and culturally appropriate foods

**Greener**

- Potential for food growing spaces multitasking as city green spaces
- Reduced chemical use, waste and GHG emissions associated with more sustainable practices.
- Caring for plants and animals increases sensitivity to native biodiversity

**Resilient**

- Social food spaces can be used as emergency management spaces
- Food related social interactions build community resilience skills and connections
- Growing spaces and irrigation storage are an attenutaion feature preventing flooding
- Urban farming and food processing can supplement healthy and comfort food in emergency
- Urban food distribution hubs provide an alternative distribution networks in emergency

**Vibrant + Prosperous**

- Local innovative enterprises growing, processing and retailing food
- Foodie culture & events enhance the quality of life and support tourism

**Figure 2:** How the sustainable food system supports 'Our City Tomorrow Principles'

## 2.5 Wellington specific constraints and opportunities

While sustainable food systems are currently experiencing a bit of a renaissance internationally, Wellington has a number of limitations that can constrain their further development. The response to a need for more housing is likely to lead to intensification further increasing competition for available space in the city. **With more dense residential development, and further restrictions on**

**availability of private gardens, comes an opportunity to develop multipurpose social food spaces that combine food, recreation and natural environment needs.**

Further information on the current number of initiatives across Wellington can be found in Victoria University's 'A Seed and A Wish' document produced in 2014 and the 'Edible Wellington Snapshot' report produced by the Council in 2011.

The research identified over 100 types of initiatives throughout the city. Most of them were in relation to distribution and retail followed by growing food & foraging – a more detailed 'Current State' analysis can be found in APPENDIX A of this report.

### 2.5.1 Growing food and foraging

Wellington has a shortage of arable land available. This is likely to be further exacerbated as city intensifies in response to housing shortages. While the city is very green, the majority of urban spaces, both Council reserves and residential gardens, are on steep slopes with poor soils. Both wind and shading further limit the areas suitable for growing food. While top soils can be over time developed on clay base and north facing slopes can potentially support a significant range of crops, Wellington will always compare poorly to Hutt Valley with its silt deposit soils and warmer microclimate.

However, Wellington's climate enables cultivation all year round, and so the growth of vegetables and fruit trees is definitely possible. It will require space innovation and the creation of new soils which will increase production cost. As a result any plants grown here will have to be either for personal/community use or high end of the market, specialty products.

Wellington City has developed and is currently implementing a strategy to protect and enhance native ecosystems within the city (Our Natural Capital). The city is replacing exotic plants in the Green Belt and other reserves with native plants and is encouraging people to do the same in their gardens. It is also attempting to eradicate predators to encourage the growth of the native bird populations. This is an important part of Wellington's identity, deeply valued by its citizens. Unfortunately there are some tensions between these strategic objectives and the idea of urban sustainable food systems. As most of the foods grown in New Zealand are exotic species, they don't support our biodiversity objectives and in some cases pose a threat to native ecosystems either by competing for space (becoming invasive) or encouraging (feeding) the predators. This tension requires careful management of cultivation to minimise impact on native ecosystems, further reducing areas where this activity would be appropriate, and to use varieties that are bio-safe.

There is an opportunity for a partnership between native and exotic plants especially building on Māori native food plants. Anecdotal evidence suggests that people are more likely to engage in volunteering where both edible and native varieties are planted. People are more likely to look after the natural environment if they are somehow connected to growing food.

New residential developments offer an opportunity to integrate more innovative food cultivation spaces. Many international cities have begun exploring their roof spaces and walls as potential areas for cultivation. In Wellington those areas are restricted to central city and its viability might be restricted by seismic risks, wind and thermal loss (wet roofs and walls lead to loss of heat that is not beneficial in Wellington's climate).

Foraging for food in the wild is part of New Zealand culture, especially for tangata whenua. This includes kai moana, berries, mushroom and salad leaves. Most of the land based wild food grows in reserves and parks.

> ***"In biodynamic farming there is no conflict between native and edible plants. Instead there is an opportunity for a partnership. We have a lot to learn from tangata whenua."***
>
> *Lydia Mabbett – Commonsense Organics*

### 2.5.2 Other parts of the sustainable food system in Wellington

Food is part of Wellington's "coolest little capital" culture and identity. Many Wellingtonians enjoy and are prepared to pay premium for local and organic produce. We have a thriving, innovative and, to a large extent sustainable, local food processing and retailing industry including bakeries, ice-cream

makers, breweries and coffee rosters. The farmers markets are popular, as are many cafes and restaurants.

Wellington has a thriving volunteering and social enterprise scene which includes community gardens, community kitchens, food banks, food co-ops, as well as food rescue and composting. This is a reflection of the fact that a significant proportion of our society, especially in lower socio-demographic bands, have limited access to fresh, healthy foods due to its price, accessibility and lack of knowledge on how to prepare it. This volunteering sector provides essential services, but struggles with funding and initiatives are prone to folding when skilled volunteers move on. It also struggles to attract wider participation from the most disadvantaged parts of the society.

Current food distribution networks in Wellington are vulnerable to shocks with all major distribution points located in Grenada North.

## 2.6 Spatial context

The majority of Wellington's food is produced by the conventional food system and a significant proportion comes from all corners of the world.

This research focused on sustainable food systems within the boundaries of Wellington City and actions and policies that the Council can introduce to support its further development.

It is however important to acknowledge that Wellington's sustainable food system can and does extend beyond the boundaries of the Wellington City. Wairarapa and Kapiti Coast are important providers of fresh produce that supply Wellington's farmers markets and grocers. There are a number of farms with environmentally friendly or organic schemes that supply Wellingtonians through veggie box schemes directly to their homes.

It is also important to acknowledge that both Porirua and The Hutt have soils and topography that are better suited for agriculture than Wellington. Market gardens used to be very popular in these locations and could once again become a feature. Farmer's markets are supplied by farmers from Kapiti, Manawatu and Wairarapa.

> ***"There is an opportunity for cooperation between regional organic/eco farmers and urban farmers. They can help us with access to the consumers and we can help them with knowledge".***
>
> *Frank Van Steensel – WairarapaEcoFarm*

# 3.0 Considerations for the Planning for Growth Project

## 3.1 Introduction

The current review of the District Plan (Planning for Growth project) offers an opportunity to enhance and strengthen Wellington's existing urban sustainable food systems.

At the moment Wellington's planning framework and its implementation is fairly permissive. In some cases, the initiatives we have reviewed were able to establish themselves and operate without much involvement from the Council.

The Planning for Growth and the Urban Growth Strategy is likely to bring in new tensions and more competition for space between residential and commercial land-use, the natural environment and public infrastructure. New policies designed to enable further growth could create new barriers if the issues that reduce the sustainability of the food system are not properly considered.

This section outlines sustainable food considerations in relation to each of the issues identified in the Planning for Growth project, and suggests how the Council could respond.

**One overall recommendation is for the Council to develop an overarching Sustainable Food Strategy that could provide guidance for implementing and managing the issues through other instruments.**

> ***"The Council works a lot at cross-purposes. They fund an organic urban farm and then spray with glyphosate on the boundary! They need to ensure consistency in their polices"***
>
> *Lydia Mabbett– Commonsense Organics*

## 3.2 Land use

Land availability has been identified as a key barrier to the growth of cultivation initiatives in Wellington. As outlined on the map below the availability of the land suitable for growing in Wellington is already limited by its topography and weather (See Appendix B) – Land Opportunity Map 2 & 3.

> ***"The key planning initiatives that the Council could undertake would be mapping and identifying best locations for food initiatives and providing guidance or typologies of what the space should like look and how they should be managed"***
>
> *Tony Moore – Christchurch City Council*

There are existing rural areas where food production could be encouraged, but they are further removed from the urban areas and would not generate the other benefits discussed in this report within section 2.4.

Opportunities for food cultivation in urban areas identified during this research include:

- Residential private gardens – could be farmed by patchwork urban farmers (see section 4.2)
- School grounds
- Social housing gardens
- Sport fields and playgrounds
- Roofs and walls (CBD has 2,035 buildings with an estimated roof area of 1,783,274 sqm, and there are 725 buildings in Wellington with roof area over 1000sqm)
- Some reserves with lower biodiversity value
- Road reserves (it is estimated that WCC manages an approximate area of 8,572,911 sqm of unpaved road reserves) and car parks
- Public spaces and vacant/ underutilised lots
- New residential developments including private, communal or public food gardens

In order to generate the benefits discussed in this report the most suitable places for further urban farming initiatives would combine different existing uses. A quick analysis of contaminated land, green spaces and emergency centre locations indicates possible synergies for further investigation (See Appendix B – Land Opportunity Map 1)

**It is not expected that the cultivation will be undertaken at a large scale, but more small, even temporary or seasonal undertakings that include on site food processing and consumption, activate spaces and encourage social connections. In this report we call them *social food spaces.*** These could be encouraged by:

- Developing guidance for social food spaces in different areas to manage food safety and biodiversity considerations and to maximise social and resilience benefits.
- Incentivising developers to include social food spaces as part of amenity requirements.
- Identifying and mapping areas suitable for social food spaces based on need (food deserts and SDI) and availability.
- Developing partnerships between council, private and community sectors to locate underutilised space for social food and providing seed funding for priority locations.
- Supporting developers following co-housing models. These are often cooperatives of individuals who take on the developer role because the market does not provide options that achieve their social and environmental objectives.
- Connecting known growers with known available places.

There are also land use considerations related to food processing and distribution activities. Both commercial and social food processing activities generate social and economic benefits. These could be encouraged by:

- Developing guidance on food processing spaces to make them more of a social space.
- Identifying suitable locations for this type of businesses or community activities and incentivising their establishment either by mandating inclusion or seed funding
- Developing partnerships and encouraging sustainable food businesses through initiatives such as Good Food Boost and Climathon.

## 3.3 Transport

Local sustainable food production would reduce the long distance transportation impact of our food but it might increase the amount of food moved around the city. **Introducing more farmers markets, distribution centres and food sharing hubs will have implications for the transport network. While at some level they might increase capacity pressures on existing transport networks, they also provides an opportunity for greater efficiencies and increased food resilience. Sustainable food systems are characterised by a greater number of diverse organisations and distribution points. This leads to greater flexibility and ability to respond to unexpected events and emergencies.**

Introducing more food related sites – both growing and retail – will attract people to these areas and impact the traffic. That is a positive impact from the perspective of creating a liveable city.

Key policy considerations in relation to transport from a food network perspective would be:

- Allow for food spaces in road design guidance such as the Yarra City Council example in section 4.4.1. of this report.
- Map existing and desired food places in the city and allow for extra food movement and modified people movement in the transport planning
- Map current food distribution routes and centres and identify priority locations for new food distribution spaces.

## 3.4 Infrastructure

The growth of sustainable food systems in the city is likely to add to the pressure on the existing conventional infrastructure such as water supply for irrigation. **On the other hand food growing areas can be incorporated into so called "green infrastructure" – natural systems that perform water retention and water purification functions.**

An example of such an initiative is using the emergency reservoir in Newtown as an irrigation resource for local community gardens or allotments. Key actions that could support achieving those benefits could include:

- Integrating sustainable food places into the integrated catchment management
- Adding urban food growing guidance to any water sensitive urban design guidance

## 3.5 Resilience, sustainability and Climate Change

As shown in this report, sustainable food systems contribute to the city's resilience, sustainability and reduce carbon emissions. From a planning perspective the actions to maximise the benefits associated with urban sustainable food systems should be:

- Integrate food growing and sharing initiatives including community gardens and co-op distribution hubs as a catalysts and social activators in other resilience and sustainability initiatives e.g. emergency centres, flood prevention features, urban form design, provision of natural environment
- Support finding appropriate locations for green food distribution networks to minimise transport emissions – e.g. distribution and food sharing hubs connected to an online buying network in community centres, alongside pick up points used by existing local food co-operatives.
- Encourage adoption of less carbon intensive distribution methods – e.g. electric vehicles and cycling by providing appropriate infrastructure.

> ***"Online shopping will change the current food distribution model. Businesses could utilise neighbourhood hubs where people can pick up their online shopping, rather than having it delivered to their door. Those places should multitask as emergency response and community facilities"***
>
> *Teva Stewart – Commonsense Organics*

## 3.6 Open space and natural environment

There is a tension between food growing and the native natural environment. Edibles are often invasive and they can encourage pest population build-up. However outsourcing the problem to the countryside or overseas should not be an answer. Sustainable food systems are a catalyst for many essential functions in the city, and they connect people to the natural environment. Growing food can and should be part of the Wellington landscape. It just needs to be done in a sensitive way to minimise the impact on the natural environment. The following actions can support that objective:

- Develop and promote guidance on what edibles have lower impact (similar to DOC's Plant Me Instead guide).
- Review Wellington's biodiversity assets to decide which are the most valuable and threatened and restrict food growing around them.
- Identify green areas in Wellington where food growing threatens native ecosystems least and develop a maintenance schedule to minimise negative impacts.
- Identify Wellington foraging assets and communities and ensure that they are managed to minimise impact on native ecosystems while not creating human health risks – e.g. identify which areas are sprayed with chemicals and which are safe for harvesting (signage, websites).
- Review the spray policy in reserves to minimise impact on organic urban farming.
- Provide education on native friendly gardening and edible natives.
- Review the Our Natural Capital Strategy to integrate sustainable food growing in an appropriate way.

> ***"Look at our farm. We have supported development of a functional ecosystem where native and introduced species found a balance and all play important role. As a result our farm is more biodiverse, resilient and coherent than many reserves."***
>
> *Frank van Steensel – Wairarapa EcoFarm*

## 3.7 Community development and recreational activities

As outlined in section 2.4, urban sustainable food systems generate multiple benefits for community resilience and social connectedness and equality. Maximising those benefits could be achieved through the following actions:

- Review of the **network of community facilities** to look at where social food spaces would be most needed (food deserts) and how can existing or new facilities be extended to allow for food processing (community kitchens), food distribution (food sharing hubs) and food growing (community gardens).With changing demographics and more home working community hubs and private/shared gardens will become more important. Improving availability of facilities such as Crave Commercial Kitchen to enable food businesses to grow, and to minimise cost associated with setting up individual commercial kitchen facilities that comply with food safety standards.
- Review the opportunity for **leasing some council land as allotments** especially in proximity of the CBD and develop appropriate guidance for their management. Urban growth will increase the number of apartment dwellers in CBD and reduce the size of private gardens. Access to private allotments would improve their access to green spaces as well as food resilience. Allotments would also allow people to create more social connections, where becoming part of community gardens is culturally or personally inappropriate for them.
- Further develop connections within the extensive food and beverage industry and already established annual events, to promote and enhance the use and consumption of local, organic produce, while supporting the food sharing schemes aimed at people with lower income.

> ***"I grew up in a large international community, but now I want my own little garden. Wellington would benefit from allotments centred around a community space. Your own green place to look after and make new friendships with neighbours without the conflict that comes with communal initiatives. Community gardens are not always inclusive spaces for everyone and can be dominated by a few strong willed individuals and therefore exclude those who are marginalised or whose cultural practices make it difficult to challenge authority.***
>
> *Teva Stewart – Commonsense Organics*

## 3.8 Built heritage and character

Heritage food varieties can be seen as part of built heritage. Social food spaces can be good solutions for heritage buildings to make them more accessible for the general public while allowing for economic activity in these buildings.

Internationally there is a trend towards using roofs and walls for food growing. This could be appropriate in some areas of Wellington where no other social food spaces are available. Roofs have better sun conditions for growing but could be more exposed to wind. Seismic issues would also need to be considered. In terms of the District Plan, care should be taken to not create barriers to using roofs and walls but leave it to entrepreneurs to activate. Further research is needed to be undertaken in order to better understand what these barriers would be.

> **The best thing Council can do, is to employ someone with deep insight to generate connections and provide training"**
>
> Frank Van Steensel – WairarapaEcoFarm

Guerrilla gardening, pocket parks, container farming as well as a network of cafes, bakeries, food trucks and markets are all examples of how food can activate urban design. Food growing, preparation and consumption all lead to more social interactions, encouraging people to linger longer in places and meet other people. Loneliness is a growing social problem and social food spaces offer one strategy to combat it.

Successful food ventures have a potential to give distinct "flavour" to different parts of the city. This could be achieved by promoting existing successful initiatives such as microbreweries and coffee roasters to form part of the neighbourhood character.

During the District Plan review, it is recommended that Council give consideration to how urban design guidance could incorporate food growing, processing and consumption places. Council would need to consider appropriate techniques to ensure that wider benefits of sustainable foods are realised, such as social space activation, and that the food is safe for consumption.

The mapping of opportunities and needs, as demonstrated by the initial mapping undertaken in Appendix C, would help prioritise which areas require integration of food spaces, which should incentivise it and where they are not appropriate.

## 3.10 Mana Whenua

Food is integral to Māori culture and there are a number of marae initiatives in the city that focus on growing and sharing food. The Council could:

- Work with mana whenua and local Māori organisations to learn from and then promote and plant native edible species, and develop safe foraging practices.
- Work with mana whenua to assess the needs and best locations for new social food spaces and other ways in which the Council can support growth of traditional Māori food practices.

> ***"There is a need to ask what support mana whenua need from the Council."***
>
> *Lydia Mabbett – Commonsense Organics*

## 3.11 Housing and development

80,000 people are expected to arrive in Wellington over the next 30 years. The city has retained a relatively compact urban form and there is support to retain this. This means that the majority of new housing will be developed through intensification of existing urban areas. Depending on how the development is managed the intensification could lead to further loss of growing and other social food spaces. To prevent this, the Council could take the following actions:

- Map existing social food spaces and make a commitment to which ones will be protected and prioritised locations for new ones
- Incentivise inclusion of social food spaces in new developments
- Mandate inclusion of social food spaces in priority locations
- Develop design guidance on social food spaces or include it in urban design guides
- Increase rates for unutilised/ vacant spaces in Wellington, and offer rates discounts where they are used for social food spaces while undeveloped

# 4.0 Case Studies

This section of the report covers international and New Zealand based case studies associated with key actors in the sustainable food systems that were deemed to be relevant to Wellington. These case studies have been categorised into the following key actor defined groups: Community and Volunteering, Developer & Body Corporate, SME & Social Enterprise, Land-use and Policy and Council Initiatives. Each of the five groups contain one indepth focus case study example and a General Overview section, which contains an overarching analysis across multiple case studies.

## 4.1 Land-Use and Policy

### 4.1.1 Focus Case Study – Vancouver Food Strategy

The Vancouver Food Strategy is an official plan or 'road map' that helps the city government integrates the full spectrum of the sustainable food system into a single policy framework. This includes: food production, food processing, distribution and access as well as food waste management.

This case study explores the detail behind the food strategy and shows how actions taken by the Council have influenced sustainable food system initiatives in the City of Vancouver. It was specifically chosen as a focus case study over other food strategies, due to Canada's similar political and social structure to that of New Zealand, alongside the extensive amount of accessible information in regards to its development and implementation.


A graphic portraying the process and details of the method being the strategies production can be seen at the end of section 4.4.2.

**What has been done?**

The City of Vancouver developed the Vancouver Food Strategy as the next step in the growth of a just and sustainable food system for the city, building on years of work undertaken by the City and the Food Policy Council. The strategy lays out a framework for how food assets can be expanded in neighbourhoods across the city in order to develop a more resilient and equitable food system, while also addressing issues of climate change and resource depletion to name a few.

The strategy is the latest addition to Vancouver's food policy history which includes the following:

- City of Vancouver food policy mandate (2003)
- Vancouver Food Policy Council (2004)
- Food Systems Steering Committee (2009)
- Local Food Goal of GCAP (2010)
- Park Board Local Food Asset Task Force (2012)
- Interdepartmental technical teams (current)

Not only does the Food Strategy coordinate and integrate previous stand-alone food policies, it is also embedded within broader city sustainability goals which focus around social / health, environmental and economic issues. By building on years of food system initiatives and grassroots community development, the strategy has the ability to create a food system that is compatible with all other sustainably driven city policies including:

- Land use planning
- Economic activity
- Housing and homelessness
- Transportation
- Waste management
- Health and Wellbeing
- Biodiversity

This interconnectivity is one of the core directives of the strategy, pointing Vancouver in the direction of zero carbon, zero waste and healthier ecosystems. To help achieve these core directives, the strategy lays out five priority focus areas, which are as follows:

1) Support urban agriculture
2) Enhance participation in community based food programmes
3) Improve access to local, affordable food retail
4) Address infrastructure gaps in local food processing, storage and distribution and increase the percentage of local food purchased by the City.
5) Expand food waste disposal programs.

**Who are the parties and what role do they play?**

Vancouver Food Strategy has been developed through an extensive consultation with a diverse group of stakeholders. As part of this process, the City of Vancouver developed strong and dependable partnerships which included:

- Vancouver Food Policy Council
- Metro Vancouver
- Neighbourhood Food Networks
- Urban Farmers Society
- Farmers Market Operators
- Community Garden Co-ordinators
- Street Food Vendor Association
- Vancouver School Board
- Local Universities and Businesses

As a part of this consultation process, the Council held discussions with the Urban Indigenous Peoples' Advisory Committee. This committee is in place to enhance access and inclusion for Urban Indigenous Peoples to fully participate in the Council services and civic life –understanding how their culture and activities could be incorporated into the food strategy was a vital step in the process of creating the strategy.

**What benefits are generated?**

The City of Vancouver predicts that its food strategy will enable it to become a global leader in urban food systems. This includes:

- Aligning a plethora of policies to build a healthier and more resilient society, improving social-economic outcomes, generating economic benefits through jobs and strengthening community capacity.

- Urban farms will be able to obtain business loans, secure insurance, lease property and invest in their operations.
- Urban farms now cover a range of different land classifications:
    - Private Residential land: 181,523 ft²
    - City-Owned Land: 107,277 ft²
    - Private Commercial Land: 24,200 ft²
- By reducing the red tape throughout the city's policy, the Council has enabled more than 5,000 food projects which include; community gardens, community kitchens, composting facilities, farmers markets, community orchards and urban farms.
- As the number of urban farms grows, they contribute to environmental, economic and social sustainability objectives including:
    - Community buildings: Activate previously underutilised and vacant outdoor space, provide community bumping space, exchange local knowledge and create a sense of community, alongside providing interaction between varying cultural and demographic groups.
    - Social and economic outcomes of residents: Educating and enhancing well-being and mental health. Employing those with addiction or past criminal convictions and at-risk youth.

**What were the barriers and how were they overcome?**

One of the barriers encountered, focused on the first core directive of the City of Vancouver – 'support urban farmers'. There were no bylaw regulations, business license or land-use zoning categories, as well as property tax implications for both the current and potential urban agricultural activity.

To overcome these barriers, the City of Vancouver made the following changes:

- Eligibility was given for farm classification in terms of property tax considerations. This classifies land as "farm" if they meet the following criteria:
    - Annual applications
    - Qualifying agricultural activity
    - Sites operate as an integrated unit
    - If land is leased, it must be greater than 0.8ha
    - Minimum farm sales thresholds: if smaller than 0.8 ha - $10,000. If greater than 0.8 ha, have $25,000 in sales.

Urban farming was also legitimised as a land use, with the following classifications given:

- Urban Farm Class A:
    - Definition: Cultivation of fruits and vegetables for sale
    - Allow in residential zones
    - Limit planting area of 325m²
    - Combined planting area not to exceed 7000m² (unless additional approval)
- Urban Farm Class B
    - Definition: Cultivation of fruits and vegetables for sale with greenhouse or other structure
    - Allow only in Commercial and Industrial Zones
    - Combined planting area cannot exceed 7000m² (unless additional approval).

The policy changes also imparted the following limits and requirements on urban farms:

- Farm size must not exceed 0.7 ha

- Sales must not exceed $9.999 if operated on a single site or by a single land owner in Class A.
- A lease is required if not farmed by the owner or principal resident
- A business license is required by all sites
- A development permit is required for Class B sites.
- All sites must be monitored and evaluated by the Food Policy Council and Urban Farming Society every two growing seasons.

Another barrier that was identified by growers throughout the city is the cost of land that would be suitable in terms of location and soil quality for growing, as well as the confusion around the legality of selling food from urban farming activities.

One of the ways in which such barriers were overcome was through seeking privately owned land in residential areas where the owner was willing to grow produce instead of grass. Assisted by the urban farm related bylaw changes, this enabled the growth of small scale, urban farms that both grew and sold food.

**How was the land used?**

Since the publication of the food strategy in 2013, the city has seen urban agricultural initiatives thrive, utilising land in an innovative way in order to strengthen the city's food resilience and grow its sustainable food system.

One of the initiatives that has benefitted from the policy changes and strategy directives is Sole Food Farms. This project has transformed acres of vacant and contaminated urban land such as road reserves, old industrial sites and vacant car parks into street farms that grow artisan-quality fruits and vegetables.

The Sole Food Street farms are also more than just a producer of organic and accessible urban food. The project is utilising food as a catalyst to provide jobs and agricultural training to some of the most vulnerable members of Vancouver's society. This includes empowering dozens of vulnerable individuals who have limited resources, suffered from addiction, chronic mental and physical health problems. Additionally, this project strives to bring together the communities of farmers and food lovers, strengthening community ties and sharing skills and values.

**What policies and other Council actions supported it?**

In order to support the implementation of the Vancouver Food Strategy, the City of Vancouver implemented the following incentives and enabling initiatives:

Food production:

- Increased the number of community garden plots by 40%
- Provided grants for infrastructure upgrades
- Adopted bylaws to permit and legitimise urban farming

Food access:

- Increased Sustainable Food System Grants funding
- Created Community Food Market Guidelines
- Updated Farmers Markets Policy by developing guidelines and a checklist for how to set up and run a stall.
- Providing funding for school food and food literacy programming

Food processing and distribution

- Developed and implemented a street food cart programme
- Developed a definition of local, sustainable procurement
- Exampled the role of small scale grocers in neighbourhood food access by promoting and advertising success stories

Food waste

- Initiated weekly food scraps and biweekly garbage collections
- Expanded Solid Waste bylaw requirements to ban food scraps from going to landfill

System Wide:

- Developed a Sustainable Large Development Rezoning Policy to ensure three food assets are required as part of any large development rezoning
- Incorporated food related priorities into community plans

### 4.1.2 Vancouver Food Strategy Graphic

**Policy Library**

- City of Vancouver food policy mandate (2003)
- Vancouver Food Policy Council (2004)
- Vancouver Food Charter (2007)
- Food Systems Steering Committee (2009)
- Local food goal of GCAP (2010)
- Park Board Local Food Asset Task Force (2012)
- Inter-departmental technical teams
- Unprecedented citizen interest and robust civil society organizations: "talk food with us" engagement program

Vancouver Food Strategy 2013

**Implementation**

| Food Producing | Procurement & Distribution | Food Access | Waste |
|---|---|---|---|
| • Increased community garden plots<br>• Grants provided for infrastructure upgrades<br>• By-laws adopted to permit and legitimise urban farming | • Develop and implement a street food cart programme<br>• Local, sustainable procurement definition developed<br>• Small scale grocers in neighbourhoods examined | • Increased Sustainable Food System grants<br>• Created Community Food Market Guidelines<br>• Provided funding for school food and food literacy programming | • Initiated weekly food scraps and biweekly garbage collections<br>• Expanded solid waste bylaw requirements to ban food scraps from going to landfill |

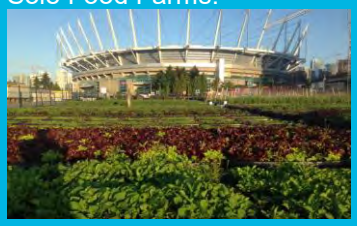
**Outcomes**

- 80% of its actions have been achieved within 4 years of publication
- Food production increased by 40%
- 22,000 residents have engaged with sustainable food initiatives
- An increase in 65 street food vendors over 7 years
- 206,560 tonnes of food waste have been diverted from landfill over 3 years
- The Sustainable Large Development Rezoning Policy have been produced ensuring three food assets are required as part of any large development

**Examples**

**Implementation / Outcomes:**

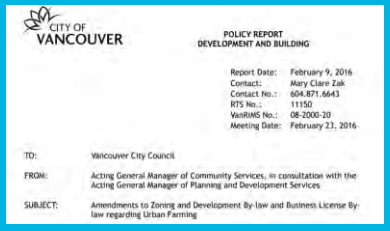
Sole Food Farms:



https://solefoodfarms.com/our-story/

**System Wide Action**

By-law Amendments


CITY OF VANCOUVER

POLICY REPORT
DEVELOPMENT AND BUILDING

Report Date: February 9, 2016
Contact: Mary Clare Zak
Contact No.: 604.871.6643
RTS No.: 11150
VanRIMS No.: 08-2000-20
Meeting Date: February 23, 2016

TO: Vancouver City Council

FROM: Acting General Manager of Community Services, in consultation with the Acting General Manager of Planning and Development Services

SUBJECT: Amendments to Zoning and Development By-law and Business License By-law regarding Urban Farming

https://council.vancouver.ca/20160223/documents/p1.pdf

### 4.1.3 General Overview

Land-use planning is a tool used by local governing bodies which seek to order and regulate the use of land in an efficient and ethical way through a District Plan. It is used in conjunction with local policies. Policies are resolutions of Council to guide the management of an issue. They can be statutory – enforceable as law under the Local Government Act, or non-statutory - a statement of the overarching intent of the Council on an issue.

**Overarching Food Strategies / Policy**

One of the most common approaches taken by cities when developing their sustainable food system is through the creation and implementation of an overarching food strategy. This has been implemented by cities such a; Seattle, London, Christchurch; Vancouver.

Christchurch City Council developed their food resilience policy in November 2014. This policy has eight achievable outcomes which focus on the following issues: Health and Well-being

1) Close knit and self-reliant communities
2) Lifelong learning
3) Thriving local food economy
4) Resilient and sustainable food system
5) Stewardship of public spaces
6) Celebrating our garden city heritage
7) Growing a beautiful and bio-diverse garden city

This strategy aims to utilise food as a catalyst for other aspects of society. Food is an enabler for community engagement and connectivity, education, economic development, and personal health and wellbeing improvements.

In order for their food strategy to be successful and deliver benefits across the focus outcomes, Christchurch City Council committed to prioritise the following actions:

- Collaborate with the community by being a participant in the creation and implementation of a Food Resilience Action Plan for the city.
- Identify and make available suitable Council owned land for food production, community gardens and other sustainable food system activities.
- Establish supportive frameworks that enable communities to use Council owned land for urban agriculture.
- Protect city soils be ensuring inappropriate development doesn’t undermine the land productive capacity.
- Advocate to central government on behalf of the community on issues that affect the city’s food resilience, such as healthy food choices in schools.
- Work with food producers, distributors, retailers and other agencies to encourage the availability and affordability of healthy food in the community.
- Support community education through community gardens and other local initiatives. Increase the knowledge on how to grow, harvest, prepare and consume healthy food.
- Support competitions and awards in order to celebrate the growth and eating of locally grown food produce.

### Identifying and Overcoming Barriers

In order to facilitate and enable the expansion, growth and success of a resilient sustainable food system, the governing body must identify the barriers that are currently hindering sustainable food system activity.

The City of Seattle recognised this necessary step in the development of their food resilient strategy and commissioned a report on “Urban Agriculture in Seattle: Policy & Barriers” This report analysed current land-use zoning policies and commercial activity regulations/ permits and assessed how they either promotes or restricts urban agricultural activity within the city.

This report produced the following recommendations / actions for the City of Seattle, in order to address required municipal and state governance improvements:

- Define urban agricultural activity within the Municipal Code
- Create unique land-use zoning classifications of urban agriculture
- Provide incentives for developers that include urban agriculture in landscaping plans in new developments.
- Develop use agreements or programs in policy that promote urban agriculture alongside further clarifying food production in relation to bee keeping and other similar practices.
- Permit the sale of agricultural products produced on public land.
- Improve access to information and interdepartmental communication
- Create a dedicated department for urban agriculture.

As a localised sustainable food system develops, its benefits become more apparent, further increasing community interest and inclusion. As a result, cities such as Seattle deemed it necessary to undertake anticipatory actions, becoming an enabler rather than a facilitator, ensuring urban agricultural activities become more effective and the overall food system more sustainable.

### Food Councils & Partnerships

In an attempt to connect the community and sustainable food system stakeholders with the local Council, the City of Portland, through their Sustainable Food Programme, established the ‘Portland Food Policy Council’ (FPC) initiative.

The FPC was established by the Council with an aim of identifying and researching food policy issues. As a citizen advisory panel that reports to the Council, the FPC presents an opportunity for citizens involved with the local food network to both raise and express issues with elected officials in order to drive and influence future policy development.

Partnerships with local schools that centre around establishing food growing projects is an approach adopted by a number of governing bodies, including the “Sustainable Schools” initiative set up within New South Wales. This initiative provides schools with access to local Council grants for the creation of food gardens, alongside teaching resources and planned activities all centred on educating the school children on food and urban agriculture.

The City of London and the Mayor of London are in partnership with Capital Growth to create a platform that promotes all community gardens, schools, allotments, co-housing developments and urban farms across London. This platform acts as a tool for volunteers to discover which gardens are available in their local borough and how they can offer their services, alongside providing resources around training, tools for growing, education and guidelines on insurance and legal implications.

> ***“The key challenge we had to overcome in Christchurch was to develop a vision for sustainable food that would work for everyone across the Council. We need to develop a culture of enabling.”***
>
> *Tony Moore – Christchurch City Council*

**Land-use Conflict**

One of the largest challenges facing land-use planning is the ability to incorporate all required uses and satisfy all necessary stakeholders, policies and communities without causing conflict.

This is a major concern within Wellington, given the potential friction between urban intensification, biodiversity and sustainable food land-uses.

A similar conflict has been observed both in Sydney and Melbourne. Both of these cities are experiencing pressure for the subdivision and fragmentation of greenbelt, town-fringe land for both development and urban agricultural use. As an instrument of easing this conflict, both cities commissioned land-use conflict mapping, as seen in Figure 3**.** This map shows the suitability of land use for either residential or urban agricultural use.

By utilising GIS to determine land suitability, availability and current land use via an online interactive mapping platform, all areas of potential conflict in land-use can be identified. This is an approach that has been adopted by local governing bodies globally such as Sutton Borough Council in London UK and has been a focus of a plethora of academic research papers, including Thapa & Murayama (2008) and Taylor & Lovell (2012).

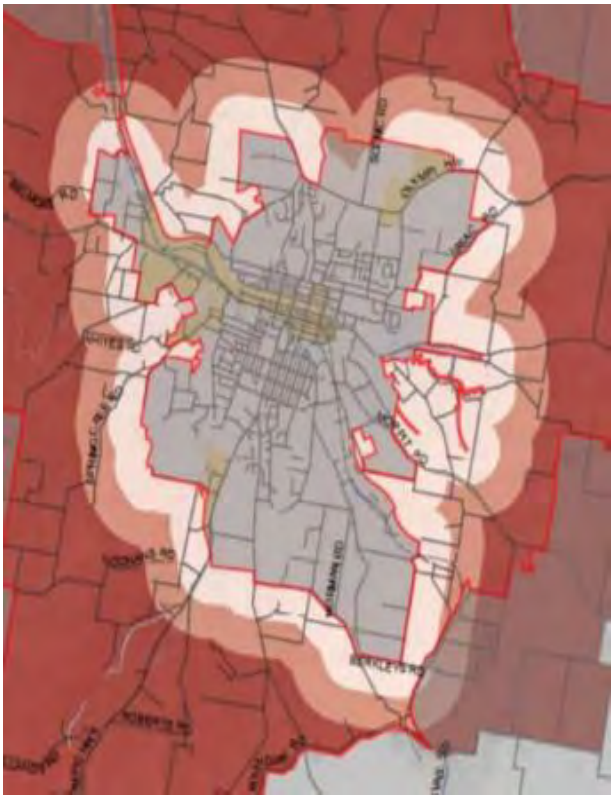


**Figure 3:** The mapping of suitability criteria for land-use in relation to residential development or agricultural use.

Source: https://www.planning.org.au/documents/item/3915

The maps produced as a result of this methodology act as facilitator for discussion between relevant parties. They provide a visual aid and demonstration of all applicable variables for the most suitable action or land-use in the conflicted area.

***"We have worked to integrate our biodiversity and sustainable food objectives. There is a way to manage the tension. With appropriate species and maintenance we can avoid negative impacts. Only fruit with hard nuts encourages rodents – they are not into soft tissue. Food initiatives foster an ethic of caring for public spaces – this brings biodiversity benefits."***

*Tony Moore –Christchurch City Council*

### “Sharing the ground level” Policy

**Figure 4:** Yishun hospital farm - over 100 types of vegetables, herbs and trees such as Chinese kale, corn, okra and fruit trees like apple, papaya and banana.

Singapore is a city where utilising land-use effectively when it comes to residential, commercial and public development is a crucial part of land-use planning.

Ensuring that the intensification of development incorporates aspects of the sustainable food system, either through the innovative use of green space or the inclusions of street level commercial space for sustainable food development, is an important cornerstone.

In order to enable and enhance the city’s food resilience, the Government of Singapore has developed their “Sharing the Ground Level” land use policy. This innovative example for land-use enables the Singaporean Government to play a key role in sustainable land-use management.

As a result of this policy, all new residential, commercial and public developments must incorporate a publically accessible green space into the street level of the development. This includes but is not limited to community gardens and recreational areas, alongside urban farms as demonstrated in Figure 4. The aim is to enhance community connectivity, creating a shared space that encourages social interaction and communication, alongside tackling the ongoing food accessibility issues facing the city.

### 4.1.4 Recommendations for Wellington

With Wellington City Council currently in the process of revising the District Plan (DP), it is recommended that aspects of urban agriculture are considered within the changes that are actioned. They could include:

- Revising the DP to see if any current policies create barriers to the SFN
- Incorporate guidelines which will enable and encourage developers to activate open spaces, whether it is private balconies or publically accessible ground level areas, for the growth of edibles and hosting of recreational activities around food.

In terms of urban agriculture, land-use planning and policy changes should not only focus on 'growing'. The council should also incorporate changes which encourage other aspects of the sustainable food system, such as processing, buying and selling and waste disposal. This could include:

- Making it easier for a smallscale SFN businesses to process and sell local produce. This can be achieved through simplifying the licensing process, incentivising businesses to procure locally and promoting green leases for commercial space.
- Ensure food waste is diverted from landfill – such as reviewing solid waste by-laws to include the banning of food scraps going to land-fill and including alternative methods such as composting and food rescue into the council's operations.
- Incentivising developers to incorporate an aspect of sustainable food system within new builds or renovations (e.g. earthquake strengthening). This could include street level commercial space that is incentivised to let to a business or enterprise with a sustainable food focus.

The Vancouver Food Strategy is a policy framework that demonstrates how a sustainable food system can be extensively developed and incentivised by a local governing body. It received Milan Pact Award for "Governance for ensuring and enabling environment for effective action".

In comparison to the City of Vancouver, Wellington is at the beginning of the process towards building a more sustainable food system. While it has a thriving food scene, Wellington is now striving to increase its food resilience through developing a more comprehensive sustainable food system across the city; focusing not just on growth, but process, distribution, buy and selling, celebrating and education – all things that were catalysed by the Vancouver Food Strategy.

One of the most applicable aspects of the food strategy is how the City implemented bylaw changes, integrating relevant definitions within the existing land-use and food related policy. With Wellington City Council in the process of reviewing its District Plan – this is an opportunity to learn from and build upon a similar experience undertaken by Vancouver.

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**Vancouver urban farm census**

https://vancouver.ca/files/cov/vancouver-urban-farming-census.pdf

http://www.urbanfarmers.ca/vancouver-urban-farming-census-2014-to-2016/

**Sole Street Food Farms:**

https://solefoodfarms.com/our-story/

## 4.2 Developer & Body Corporate Initiatives

### 4.2.1 Focus Case Study - Grow Community, Bainbridge, WA

Bainbridge Island, Washington State in the USA, Grow Community is an overarching development which strives to create a circular economy of sustainable living and food. It therefore covers a multitude of sustainable food system categories, including; Grow – Distribution – Eat – Waste & Compost.

**What has been done?**

'Grow Community' is a residential development funded by the managing developer, Asani LLC. It is the first One Planet Community to be occupied by residents in North America.

The Grow Community development is a partnership of local, sustainably minded organisations and companies who are dedicated to producing sustainably focused residential communities, through good land-use planning and technology use. The development consists of 142, 1 to 2 bedroom apartments and stand-alone family homes, built in three phases, which are all in line with a sustainability action plan based on the One Planet Living principles.

Local and sustainable food is a core aspect of this development, with the site consisting of active community gardens, orchards and a greenhouse that cultivates fresh, organic produce which is either consumed by residents or donated to a local food bank, alongside compostable waste facilities. The development also incorporates an extensive and sustainable transport network to local urban centres which are in close proximity to the development, increasing accessibility of the local food network to residents.

Additionally, this development strives to create social food spaces, where residents can connect and socialise, enhancing and developing the community spirit and sense of belonging.

**Who are the parties and what role do they play?**

*Asani LLC*

- Managing developer of Grow Community – a green developer with interest in residential real estate investment. The company has goals with a sustainability focus that create real economic and environmental benefits through each of its projects.

*One Planet Living*

- A non-profit environmental organisation that has developed a programme which envisions a more sustainable way of living using less of The Earth's resources. It lays out 10 guiding principles as a framework to build sustainable, healthy communities:

  1. *Health and Happiness*
  2. *Equity and Local Economy*
  3. *Culture and Community*
  4. *Land Use and Wildlife*

5. *Sustainable Water*
6. *Local and Sustainable Food*
7. *Sustainable Materials*
8. *Sustainable Transport*
9. *Zero Waste*
10. *Zero Carbon*

*Homeowners' Association:*

- Govern the development and manage the residential community as it progresses through the build phases. Homeowners have self-organised into 'integration circles' to allow the interest of renters and owners to be expressed – all in support of One Planet Living.

*Grow Partners*

- Grow Community Bainbridge has also partnered with a wide range of sustainable home design and construction companies and organisations, all of which have core values that centre on environmental awareness, sustainability and social responsibility.

**What benefits are generated?**

- It becomes a centre for culture and community and promotes an active and connected community through multiple bumping spaces and community based initiatives.
- It preserves and augments the natural habitat and wildlife onsite.
- It promotes sustainable water use through rainwater irrigation and greywater recycling.
- The residents have healthier, fresher, lower-carbon diets by improving access to locally sourced healthy foods through community garden and improved low-carbon transport links. The Development targets that residents will consume 70% locally produced food by 2020.
- Aims to generate a zero waste community, with a target of reusing, recycling and composting 70% of residential waste by 2020.

**What were the barriers and how were they overcome?**

A lengthy development process:

- Applying for planning through the Housing Design Demonstration Programme (HDDP) ordinance was a lengthy process. This was overcome by dedicating an experienced team of investors and designers who worked together to find solutions. The City of Bainbridge Island has also conducted reviews in order to optimise the planning process through the HDDP ordinance.

Residential participation in and maintenance of the community gardens:

- By facilitating the foundation of the Homeowners Association and giving residents governance over the community gardens it encouraged participation – 65% of the residents currently volunteer.

Ensuring residents engage with the One Planet Living Ethos:

- Effectively promoting and marketing the development as a One Planet Living community, alongside efficiently educating residents in the overall sustainably minded ethos expected in the community.

**How was the land/ space used**?

An innovative forward thinking planning process was adopted by the local City Council to promote and incentivise sustainable and green focused residential developments.

- The development incorporates urban intensification, green infrastructure, affordable housing and a circular economy food network into the development.
- The development is located close to urban centres and facilities to ensure more resilient food access and distribution and to promote low-carbon sustainable transport.
- Denser multilayer housing typologies made it possible to allocate space for gardens without significant loss of yield.

**What policies and other council actions supported it?**

Bainbridge City council adopted an early pilot policy to allow for smart growth and intensification of urban density in order to provide the template for the Grow Community development team to maximum opportunity around sustainable development and intensification.

Bainbridge Island's HDDP ordinance adopted by the City of Bainbridge Island - Ordinance Number 2013-25. This is an incentive ordinance which rewards innovative, green and sustainably focused residential developments to gain a higher base density if it meets the requirements laid out within the document. A 5% increase in lot coverage for Tier 3 projects, and a 10% increase for Tier 1. The requirements are split into two categories; the first includes LEED, BuiltGreen or Evergreen Sustainable Development certifications, the second focuses on housing diversity e.g. affordable housing, unit type, and unit size. An example of the requirement can be seen in Figure 5.

| Density Incentives | Requirements to Receive Incentives | |
|---|---|---|
| | Green Building & Innovative Site Development | Housing Diversity |
| **Tier 4** | | |
| 2.5 x Base Density OR Max. Bonus Mixed-Use FAR | • Living Building Challenge (ILFI) OR Passive House (Passive House Institute US/ International)<br>• 36 Points in Innovative Site Development Practices | • Home size not greater than 1600 sq. ft.<br>• 10 pts/ 10% of units affordable housing |
| **Tier 3** | | |
| 2.5 x Base Density OR Max. Bonus Mixed-Use FAR | • LEED Silver, BuiltGreen 4, or Evergreen Sustainable Development<br>• 30 Points in Innovative Site Development Practices | • 50% affordable housing<br>• Home size not larger than 1600 sq. ft. |

**Figure 5**: An abstract of the housing design demonstration project scoring system.

Source: http://www.ci.bainbridge-isl.wa.us/DocumentCenter/View/2298/ORD_2013_25_AMENDING_HDDP_PROGRAM_APPROVED_121113?bidId=

One of the aspects of 'innovative site development practices' which qualifies a development for the HDDP programme is 'Common Open Space'. This space has to qualify as an active open space designed to integrate the community. It should include active elements such as a neighbourhood garden / pea patch and composting facilities' – road side buffers do not contribute to this space.

**BedZED – London, UK.**

An alternative example of a One Planet Living Development is BedZED, which is based in London within the jurisdiction of Sutton Borough Council.

In order to support this sustainable mixed- use development, Sutton Borough Council incentivised the developers (Green Architect - Bill Dunster and sustainability charity - Bioregional) by selling a plot of brown-field land (previously used for spreading sewage sludge) at a lower than full market value price. The council justified this on the basis that building BedZED rather than a conventional housing estate would secure wider community benefits, enhancing the local environment, increasing food resilience and reducing residents' carbon footprint to name a few benefits.

BedZED was one of the founding developments for the One Planet Living framework utilised in the Bainbridge Grow Community development. The BedZED and Grow Community differ in that London incorporates intensification within its land-use development whereas developments within Bainbridge Island don't necessarily consider intensification a key aspect of the design. Therefore BedZED had to adopt a more innovative green space land-use design. This was achieved by ensuring that all apartments are connected to garden areas – which in most cases were connected via bridges to the neighbouring development building where space was more accessible.

At the time of development, Sutton Borough Council had minimal inclusion of sustainability in their land-use planning. However, since the BedZED development the council has produced a sustainability and climate change adaptation, mitigation and resilience focused 'London Borough of Sutton Local Plan 2018'.

As a part of this Local Plan, the council also produced a "Building a Sustainable Sutton: Technical Guidance 2018" for developers. This document contains recommendations and guidance notes for developers in relation to carbon offset, biodiversity accounting and also green space activation – part of which includes laying out a good practice checklist for the developers to follow. A sample of this can be seen below:

| | |
|---|---|
| **Green Space Factor (GSF)/ greenspace coverage**<br>➢ for previously developed sites –achieve an improved Green Space Factor (GSF) score of at least +0.2<br>➢ for greenfield sites - achieve a GSF score of at least 0.5<br>➢ for previously developed sites – Increase overall green coverage on site by at least 10% | |
| **Green Roofs**<br>➢ introduce green roofs on all buildings where feasible (GSF score = 0.7)<br>➢ design green roofs to capture rainwater and minimise run-off at source - see SuDS below<br>➢ maximise biodiversity by using 'dry meadow extensive' to 'semi-intensive' biodiverse green roofs rather than sedum roofs<br>➢ design green roofs to ensure compatibility with renewable technologies e.g. solar PV | |
| **Local Food Production**<br>➢ safeguard any allotments on site and/ or create new allotment areas for local food cultivation<br>➢ use species that provide food, including fruit and nuts<br>➢ compost household and garden waste for use on site | |

**Figure 6:** Urban Greening –"Good Practice Checklist" – Sutton Borough Council Local Plan 2018.

Source: https://drive.google.com/file/d/1sVECu4YKjFke7n0VE4X07JMtBzrnXdBV/view: "

### 4.2.2 General Overview

By drawing on international and national examples an understanding can be gained of how local Councils and governments have incentivised and directed developers and body corporates into including aspects of sustainable and green land-use and the sustainable food system within the design of the development in question.

**Green Roofs - Urban Farms & Shared Private Gardens**

Utilising the roof space, ground space or vertical walls of publically and privately owned commercial and residential developments to set up either urban farms or community gardens has been a key focus for districts such as Queens in New York and South Bank in London. The Brooklyn Navy Yard Farm covers 2.5 acres of agricultural green roof, producing 50,000 lbs of organic vegetables a year which are supplied to surrounding restaurants, shops and community members.

This urban farm was incentivised by a grant from the New York City Department of Environmental Protection with the New York City Council also ensuring planning policies supported green roofs on industrial buildings and ensured the farm had access to business licences.

A secondary benefit of this urban farm is its water sensitive urban design aspect. By occupying such a large urban area with green 'farm land', it improves the cities capacity to cope with high rainfall events, due to the retention and slow infiltration of surface water.

### Commercial Retail Development

One of the core aspects of the sustainable food system is distribution, storage, selling and buying. In California, the local government identified those residential areas that are underserved when it comes to families and individuals being able to access distribution points for fresh, locally produced and sourced food.

To improve this accessibility in underserved areas, local governing bodies have provided incentives which encourage the development of healthy food retail. These include:

- Tax exemptions for grocery stores located in specific areas in town, such as construction materials taxes.
- A 10 year waiver on retail property taxes and business license fees.
- Providing funds to new or pre-existing retail outlets in order to purchase locally sourced foods to sell at affordable prices.

### Urban Intensification Incorporating Green Space and Community Connectivity

In Singapore, as a result of the shortage of available land, the intensification of all urban areas is a necessity. One of the main considerations within this intensification process is to ensure green space and sustainable design is incorporated within all new developments.

To facilitate this, the Urban Redevelopment Authority has created planning guidelines that demonstrate the provision of green, publically accessible spaces in private developments. This policy applies to both new builds and redevelopment proposals and must be included as part of the planning conditions submitted to the local government.

These guidelines ensure that all new developments within the city promote community connectivity through public access to green space, subsequently encouraging social interaction and increasing community resilience. With this policy in place, publicly available green space has been utilised to grow urban food through community garden schemes.

> ***"Conventional developers maximise the space within individual apartments. The shared spaces are only halls and foyers and these aren't designed to encourage community. If you leave it to the developer model, it will be a slow process to get innovative ideas coming through that support community."***
>
> *Bronwen Newton – Urban Habitat Collective*

### Co-Housing Initiatives

Examples of affordable co-housing developments such as Arbor House in New York and Mariposa in Denver Colorado have ensured that residents have access to locally sourced organic foods by incorporating roof top farms and community gardens into the design of new developments. The gardens, which are managed by the residents, not only provide a source of locally grown organic produce, but also provide a focus for community engagement, acting as a "bumping" space which consequentially increasing connectivity between residents.

The role of the local governing body was as a co-partner within the development. This ensured that the governing body could do the following:

- Provide direction for the development, ensuring that it incorporated affordable, sustainable housing, with accessible green spaces that enhanced the local sustainable food system.

- Identify challenges faced by the developer and how the Council can adapt its land-use policies to better facilitate the development and encourage sustainable land-use and the food network.

Taking residential developments which incorporate Urban Agriculture to new level, neighbourhoods called ‘Agrihoods’ are being developed across the United States. These are residential developments built around a farm – a community that embraces local food production, using the ‘sweat-equity’ of residents to create a sustainable food system.

An example of an Agrihood is Agritopia in Arizona. The community consists of 450 houses over 90 acres that is surrounded by 11 acres of urban farmland. The village also contains farm-supplied restaurants and commercial initiatives.

**Small Scale Initiatives**

In high density urban areas where in residential intensification is required, such as Wellington, any new apartment blocks could adopt more innovative space activation initiatives in order for residents to have the ability to plant and grow vegetables. One solution is to incorporate balcony planter boxes that can accommodate the growth of herbs and other small vegetables into the design of the balconies.

To help encourage developers to incorporate balcony gardens within residential apartment blocks, the Department of Environment, Land, Water and Planning in Victoria, Australia, included requirements of sizing for balconies which incorporate planting within their ‘Apartment Design Guidelines for Victoria’, as seen in Figure 7.

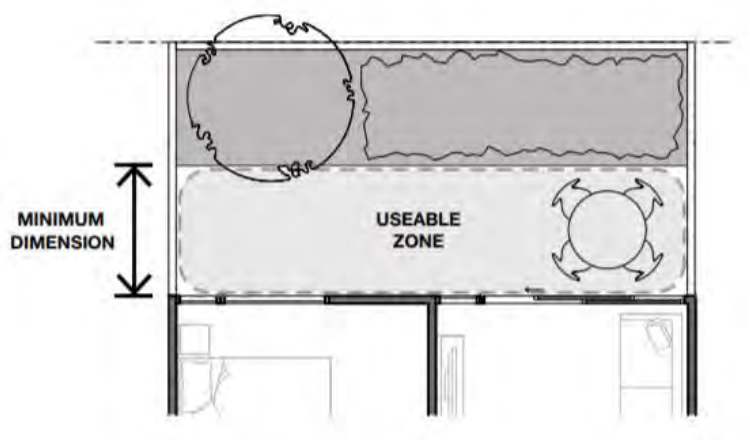


**Figure 7:** Plan diagram for planting area including in private open spaces - minimum dimensions and areas.

Source: https://www.planning.vic.gov.au/__data/assets/pdf_file/0030/80994/Apartment-Design-Guidelines-for-Victoria_August-2017.pdf

As part of the planning process, these guidelines have to be referred to by the developers and their wider design team, therefore highlighting balcony planters as a viable option to be included within the residential development.

### 4.2.3 Recommendations for Wellington:

As accessible plots of land are becoming more sparsely available throughout Wellington, intensification has become a key focus for development, specifically in urban areas. This provides a basis for the City Council and land-use planners to encourage small-scale land-use innovations within future developments that have the potential to maximise the utilisation of the available land, whilst also incorporating and enhancing food system sustainability.

Examples of this include:

- Encouraging publically available green space to be incorporated within the development. This would provide a bumping space for residents and neighbours alike, which ultimately increases community connectivity and encourages social interactions.
- Incentivise developers of apartment blocks to incorporate green space that includes organically grown edibles within their design where feasible. This will provide the facilities for residents to be proactive in growing their own produce and an activity that the community can share, therefore encouraging a longer presence in the space and greater social interaction.

> ***"More intense development is a great opportunity to create social food spaces. When there is unused land in the city, Council could look at ways to make it productive. Make owners pay more rates if they leave it empty? Offer support to turn empty sites into temporary parks or gardens? Empty buildings and land have a negative impact on the city."***
>
> *Bronwen Newton – Urban Habitat Collective*

Methods of incentivising developers that Wellington City Council can adopt include:

- Review the land-use planning policies and guidelines to incorporate the inclusion of sustainable food system initiatives in new developments. This can be achieved through design guidelines and design code documentation.
- The Council have the ability to provide funding or rates relief incentives to smaller scale food retail developers that procure and sell locally sourced, affordable foods.
- Review and optimise the permit process for the growing, distribution and selling of locally sourced urban agricultural products to make it easier for small-scale initiatives to start up.
- Incentivise the use of underused / negative spaces that are owned by developers / investors in central city locations. This can be achieved through increasing rates for empty, not used lots and providing funding for temporary community or business growing initiatives.

> ***"There is a shortage of land for development, why not prioritise development that aligns with city objectives and delivers multiple benefits? Groups like ours that have purposes around quality living spaces, green space and building community don't have the resources or agility of commercial developers. It would be great to have Council support because we want many of the same things."***
>
> *Bronwen Newton – Urban Habitat Collective*

The similarities that can be drawn from the focus case study is that like Wellington, Bainbridge has a focus in providing new residential developments that are affordable, accessible and sustainable in areas of limited land availability.

The planning process and HDDP ordinance of awarding developments which are green and sustainably focussed with a higher base density is an approach that could be adopted by the City Council in order to encourage developments that incorporate and promote sustainable food initiatives and improve resilience.

Wellington has the option to use the HDDP ordinance as a framework or guidance towards the inclusion of developer incentives within planning policies and guidelines. The incentives would reward those developers which incorporate and include innovative green and sustainable design within their development.

Incentives can include a greater allocation of land as per the HDDP, or other approaches such as rates relief and funding and the ratio of affordable housing that is required - all of which can apply to both developers with a sustainable ethos and those who haven't traditionally taken a sustainable approach to designs.

A key lesson from BedZED could be developer checklists and development guidelines for green space land-use innovations such as green walls, green roofs and local food production.

> ***"We are building a community and houses at the same time. Growing and sharing food will be an important part of it."***
>
> *Bronwen Newton – Urban Habitat Collective*

**References:**

For more detail on the case studies mentioned in this section, please refer to the following links:

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*Brooklyn Grange Farm:*

*https://www.brooklyngrangefarm.com/sustainability-1/*

*Incentivising the Sale of Healthy and Local Food:*

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## 4.3 Council Led Initiatives

### 4.3.1 Focus Case Study – Portland Farmers Markets Expansion

The Portland Farmers Market addresses the distribution, storage, buying and selling aspects of the sustainable food system within the City of Portland. Similar to Wellington, the farmers markets are a stalwart feature of the city's landscape and form a core community bumping space for the city's residents.

**What has been done?**

The City of Portland in the state of Oregon, USA conducted a study to examine the capacity of Portland's farmers markets to expand into the future, looking at a plethora of aspects that both promote and hinder their expansion. As an integral part of Portland's sustainable food system and food distribution, the local governance recognised that their expansion can help increase Portland's food resilience.

The economic analysis undertaken on Portland in 2017 demonstrates the city has over 200 individual vendors ranging across bakeries, butchers, seafood providers, cheese makers, fresh produce and speciality food producers. The main output from this report focuses on identifying and evaluating appropriate roles and actions that the City of Portland can adopt in supporting the expansion of farmers markets to areas of the city where they currently did not exist.

The study was commissioned by the City of Portland to the Portland Farmers Market Collaborative and a private consultancy team.

**Who are the parties and what role do they play?**

The City of Portland:

- Currently support farmers markets in allowing them to occupy public land, assisting them in transporting the produce, alongside providing marketing and promotions, management and funding consultation.

- Commissioned the research in relation to the expansion of farmers markets and act in partnership with the Portland Farmers Market Collaborative to help the markets grow and succeed.

Portland Farmers Market Collaborative:

- A not for profit organisation operating six farmers markets in Portland. They connect to more than 200 vendors around Oregon and Southwest Washington State, contributing to the success of local food growers and producers, creating vibrant community gatherings.

**What benefits are generated?**

The study and consequent actions by the City of Portland has helped the farmers markets to expand into areas of the city where their influence is most needed, increasing the accessibility and further expanding the distribution network of locally sourced sustainable produce. All of which increase the city's food resilience.

The benefits of farmers markets surpass the buying and selling of local food produce. They also provide a community bump space for local residents, increase community connectivity, boost local economic activity and ultimately increase the resilience of the community that they are located within.

**What were the barriers and how were they overcome?**

Matching the supply with demand for farmer market produce was one of the early difficulties to be overcome to minimise risk for the farmers and to minimise wastage. This was addressed by:

- Understanding both the farms and the regions that supply the farmers market produce, alongside what barriers they face in meeting demand, including labour and food growth area suitability.
- Tax incentives provided by the Council to suppliers who prioritise farmers markets over other competitors.

Another barrier to expansion of farmers markets was finding permanent sites of sufficient size in underserved communities. This was addressed by:

- Tax incentives for private property owners who donate land to be used for market sites.
- The Council can facilitate the provision of permanent sites for the markets – by creating land-use policies which help to support the use of public spaces, review site requirements for farmers markets and designate city staff to coordinate with the market vendors.
- The Council have made publically owned car parks and land reserves available for the markets, alongside collaborating with schools.

Lack of desire for a solid organisational structure and sustainable financial foundation:

- Provide a designated city liaison with the farmers markets.
- Incentivise and facilitate the farmers market association in developing an organisation structure, including market pathways, permanent location, marketing etc.

**How was the land/space used?**

The City of Portland commissioned the creation of "Market influence and location" maps for the currently active Farmers Markets. The GIS mapping was undertaken to determine the most appropriate sites for future markets, as well as identify what areas of the city the markets are currently serving and where their influence is absent.

Through this methodology it was determined that 75% of farmers market users live within a two mile radius of the market and therefore this distance was used during mapping as the maximum sphere of influence per market location. As seen in the Figure 8 on the following page.

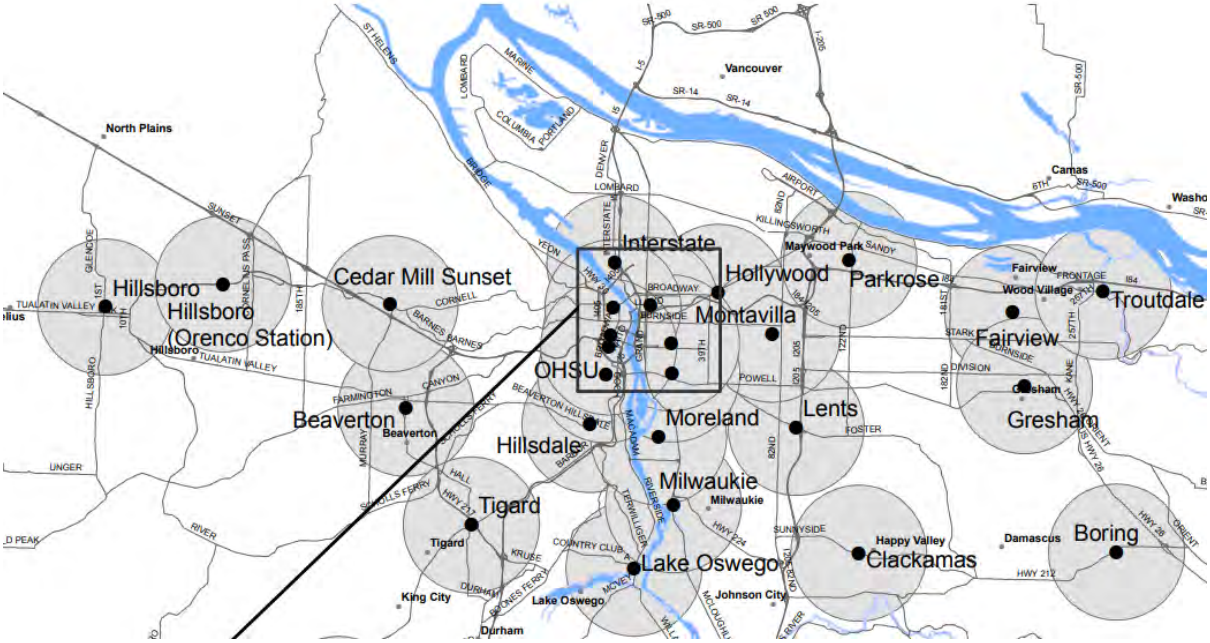


**Figure 8:** Portland Metro Area Farmers' Market locations.

Source: https://www.portlandoregon.gov/bps/article/236604

**What policies and other Council actions occurred as a result?**

The Farmers Market Study, as commissioned by Portland City Council, produced a series of actions and incentives that the City Council is or could undertake in order to support the markets. This includes but is not limited to the following:

Currently Active:

- Develop an official Farmers Market Strategy that details the business development plan.
- Incorporate farmers markets into the established City Wide Sustainable Food Programme.
- Produce road signage that communicates the location of the markets.
- Provide market-management assistance.

Recommended:

- Create an official Council liaison to the farmers markets that can be contacted by both the Portland Farmers Market Collaborative and the vendors.
- Develop a policy statement that spells out the City's role vis-à-vis farmers markets.
- Incentivise the farmers markets by providing tax relief for local suppliers and develop local procurement preference policies.
- Make permits and regulation more accommodating and accessible to vendors that sell locally sourced, organic produce.
- Offer funding to start-ups which focus on the distribution of local, sustainable foods.

### 4.3.2 General Overview

As the local governing body, the City Council has both the power and the responsibility to provide leadership and initiate action for change. Developing, publishing and implementing initiatives is one of the pathways that Councils can take when they want to generate change, alongside funding, providing a service and educating residents.

**Community Growing Programmes**

The implementation of community growing programmes / gardens is a common theme amongst governing bodies. This is an approach taken by Brisbane City Council.

In Brisbane, the City Council has actively supported community groups by providing access to publically owned land. Working in collaboration with schools, churches and community centres, the City Council has provided green space, grants, tools, education and event organisation services to the community gardens.

In order to ensure the effective management and care of the land that the Council have granted to be used as community gardens and to avoid neglect and abandonment of the land, guidelines were established which have to be met by the chosen community group before the land is occupied.

Brisbane City Council's support for urban farming relates to its support for community groups, but also achieves environmental objectives. They recognise that food is a tool and a catalyst to a plethora of greater benefits surrounding community connectivity and social activation. By using pathways such as a 'Community Grants Policy' and their 'Vision Clean and Green Brisbane', the Council have also developed guidelines on sustainable gardening. These guidelines include:

- Water conservation
- Waste reduction and composting
- Organic growing
- Native species
- Food for wildlife

To effectively provide the required skills and knowledge for gardening, the City Council have run bespoke, free workshops throughout communities for anyone who is either a member of a community garden or a garden enthusiast. Lack of gardening skills was identified as one of the barriers by the people interviewed as part of this research.

**Underutilised Space Activation – Road Reserves**

Underutilised private and publically owned green space is predicted to be one of the larger areas of land-use that has the potential to be effectively utilised for urban agriculture within Wellington.

This category of land includes but is not limited to; private gardens, road reserves / verges and playing fields. In an attempt to activate this land, both Yarra and Melbourne City Councils have developed an initiative called 'Community Growing Spaces Programme' which promotes and facilitates gardening in a 'fun and safe way' in order to connect local communities.

A specific focus of this programme is activating laneways or road reserves. In order to support and facilitate communities activating these spaces, the Council runs workshops which ensure community members are educated in the required safety regulations associated with working near roads, these include:

- Pathway clearance
- Intersection offset
- Signalised Intersection offset
- Tree protection
- Fire hydrant, street lights and street furniture
- Parking access and safety
- Driveway clearance
- Clear line of sight for users

This also includes the following visual guidelines as demonstrated in Figure 9:

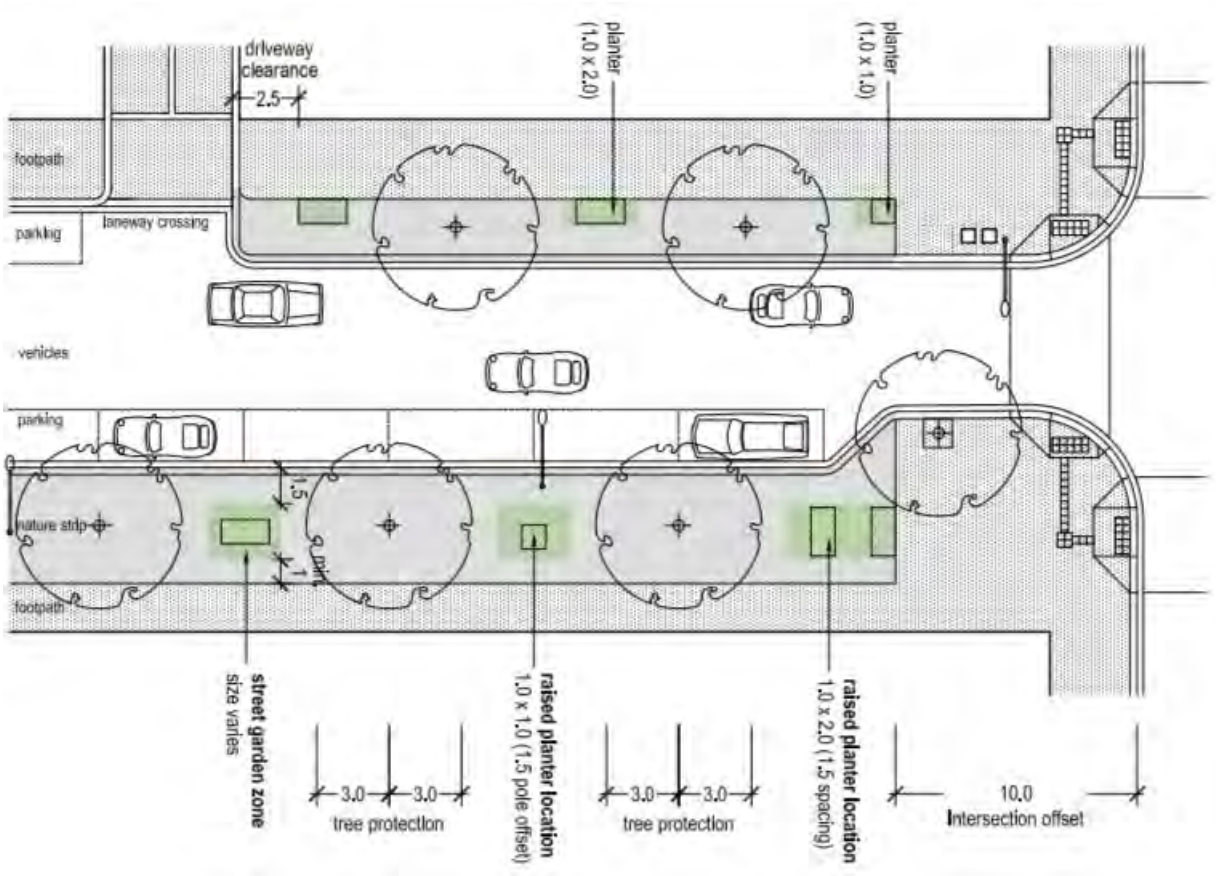


**Figure 9:** Street Garden Guidelines.

Source: https://www.melbourne.vic.gov.au/SiteCollectionDocuments/street-garden-guidelines-booklet.pdf

The Council also provides planter boxes and funding to buy tools, soils and seeds. As part of this initiative, the Council encourages the community to plant herbs and other lower-maintenance, easily accessible edibles within the boxes.

One of the most noticeable underutilised categories of land within cities is green spaces located in and around social housing developments. Activating this space is one of the main focuses of the Urban Agriculture Strategy 2014 developed by the City of Yarra. The publication of the city's Urban Agricultural Strategy supports the installation and expansion of planter boxes, fruit trees and guerrilla gardens within and around social housing developments. As a result of this strategy, over 50 planter boxes have been installed by community members and multiple guerrilla gardens have been put in across the communities.

Another approach taken towards space activation in London is through grass root activation. Initially started by urban interventionists, guerrilla gardens were appearing in deprived locations across London, as seen with the Brixton Edible Bus Stop project. London City Council recognised the positive impact that over 100 edible guerrilla gardens were having on communities and supported the projects by officially opening them as 'Pocket Parks'. With this, the Council also provided signage which portrays what is planted in the different locations and how to grow and cook these edibles.

**Biodiversity and Indigenous Practices**

The City of Bayswater Council in Perth, Australia have taken an alternative approach to the presence of edibles within designated public parks, by reducing the amount of red tape, producing guidelines and nominating areas of parks where the public can plant edibles.

This initiative was in collaboration with the Council park division, who have the authority to approve, deny and re-arrange the parks if an edible is planted in an undesirable location. All of this was done in aid of reducing friction between biodiversity and edibles within the parks.

In relation to indigenous practices such as foraging, Worcester City Council adopted the approach of releasing rules for the picking of fruit from vegetation in publically owned land titled the ‘Fruit picking and Foraging Policy”. This focused on individuals collecting small amounts of fruit for personal and not commercial use, without damaging vegetation or sensitive habitats.

**Food Education – Food Recovery & Composting**

A reduction in food waste and an increase in a culture of food recovery and composting is one of the key aspects of a resilient and more sustainable food system. As a result of this, governing bodies are implementing initiatives with the aim of changing societies approach / behaviours in relation to food waste.

‘Love Food Hate Waste’ is an initiative that has been implemented by Brisbane City Council, similar work was undertaken by Wellington City Council’s Waste Minimisation team – the initiative helps encourage a behavioural change. This is achieved through the Council ensuring its presence in local events such as farmers markets as well as a high-street presence in the form of a ‘Love Food Hate Waste’ stand or stall. From this stall, they offer the public free produce or baked goods that have been made with rescued produce. An example of this is a banana bread made with rescued bananas, as seen in Figure 10.


**Figure 10:** Food Rescue Stall in Brisbane.

Source: https://www.brisbane.qld.gov.au/whats-on/event/love-food-hate-waste-suburb-activation

The free baked good comes with an associate recipe or pamphlet that subsequently educates and encourages the individuals to practice using food rescue produce in cooking. This is all with the intention of promoting and celebrating a culture of food rescue.

Another example where Brisbane City Council has encouraged a reduction in food waste includes their 'Community Composting Hub' programme**.** Utilising the Council funded community garden facilities, the city offers free workshops for composting and how to reduce organic waste that otherwise goes to landfill. This educates the local communities in good food waste practices, alongside providing viable and organic compost that can be used in the community gardens.

### 4.3.3 Recommendations for Wellington

The successful implementation of Council initiatives is one of the most effective methods that Councils can adopt in an attempt to expand and grow the sustainable food system.

It is recommended that Wellington City Council utilise existing initiatives, such as the 'Home Compost Guide' and the plethora of Council supported community gardens throughout the city as the foundation stones for developing and expanding initiatives throughout the City.

The focus of these initiatives could include:

- Develop educational and practical workshops in order to share skills and knowledge around sustainable food practices such as growing, food processing and food waste management. This could be centred on mini-gardens in public spaces and also include educational signage – free seeds, seedlings, and distribution.
- Incentivise and fund the utilisation of public land such as road reserves. This can be through design guides, training and funding which ensure effective cultivation and management of these areas of land.
- Develop initiatives that focus on food waste and recovery. Celebrating and promoting knowledge and success in these areas.

> ***"Sustainable food needs to avoid exclusion. We need to think holistically and ensure that everyone has a chance to participate."***
>
> *Lydia Mabbett – Commonsense Organics*

Additionally, Wellington's farmers markets are already an integral part of the city's landscape within the areas that they are located. The markets represent affordable and fresh produce which is procured from a mixture of locally based farmers and retailers and/or wholesale food retailers.

Currently, Wellington City Council have no official strategy or plan for the effective management and/or further expansion of the markets to enable access to a greater proportion of the city's population.

The City of Portland was in a similar situation when they commissioned their study. As a consequence of the study, the City of Portland undertook a number of the recommended actions. This has resulted in the markets now including over 200 individual vendors who sell produce throughout the City from Monday – Sunday on a weekly basis.

**References:**

For more information surrounding the case study examples mentioned within this section, refer to the following references.

Brisbane City Council:

https://www.brisbane.qld.gov.au/whats-on/event/love-food-hate-waste-suburb-activation

https://www.brisbane.qld.gov.au/whats-on/event/love-food-hate-waste-suburb-activation

https://www.brisbane.qld.gov.au/environment-waste/be-clean-green-brisbane/community-groups/community-gardens-city-farms

Space Activation:

https://www.yarracity.vic.gov.au/services/living-sustainably/grow-your-own-food/how-do-i-get-a-planter-box-or-a-laneway-garden

https://www.melbourne.vic.gov.au/SiteCollectionDocuments/street-garden-guidelines-booklet.pdf

https://www.yarracity.vic.gov.au/services/living-sustainably/grow-your-own-food

Food Councils & Partnerships:

https://www.portlandoregon.gov/bps/64818

https://www.portlandoregon.gov/civic/article/129721

https://www.sustainableschoolsnsw.org.au/teach/food-gardens

Biodiversity and Indigenous Practices:

https://www.abc.net.au/news/2018-02-08/bayswater-council-opens-up-parks-to-resident-food-planting/9404394

https://www.worcester.gov.uk/fruit-picking-and-foraging-policy

Guerrilla Gardens:

http://www.brixtonblog.com/12667/12667

https://www.huffpost.com/entry/the-edible-bus-stop-guerrilla-gardeners_b_3325980

Capital Growth Partnership

https://www.capitalgrowth.org/spaces/

Portland Farmers Market Strategy

**http://www.portlandfarmersmarket.org/**

**https://www.portlandoregon.gov/bps/49940**

## 4.4 SME & Social Enterprise

### 4.4.1 Focus Case Study – Cultivate Christchurch

Cultivate Christchurch is a multi-faceted organisation that covers a broad range of elements of sustainable food systems. This includes growth, processing, distribution, buy and sell and waste through their 'Cultivate Urban Farms', 'Cultivate Produce' and 'Cultivate Compost' initiatives.

This initiative ensures that the distance between the growing and eating aspects of the sustainable food system is as short as possible, improving accessibility and guaranteeing the time scale from harvest to table is minimal. This is also the case for waste and composting; 'Cultivate Waste' ensures food waste produced within the CBD is re-engineered into compost and bio-remediate soils.

**What has been done?**

Cultivate Christchurch was started after the 2011 earthquake by two individuals who had a vision to transform urban areas into farms to provide employment and skills to young people and fresh, local produce to cafes, restaurants and residents through existing veg box providers. Cultivate currently has four farms, including one in the centre of the city on Peterborough Street. The project was started and has been maintained with grant funding but is now moving towards being financially self-sustaining.

Cultivate aims to provide a broad range of organic seasonal vegetables to local businesses, which have been handpicked from the fields and delivered to the CBD by bike by the young people who are employed on the farms. This is operated in a way that is similar to the initiatives such as KaiCycle and Common Unity, both of which successfully operate within the greater Wellington region.

**Who are the parties and what role do they play?**

Cultivate Christchurch is an SME run by a small team of dedicated employees and a large group of committed volunteers who span the broad community demographic.

Cultivate relies on a number of principal funders, as listed below:

- Vodafone New Zealand Foundation
- Wayne Francis Charity
- Rata Foundation
- Ministry of Youth Development
- Dove Charitable Trust
- Christchurch City Council
- Canterbury District Health Board
- Life in Vacant Spaces

Alongside dedicated Cultivate Waste and Cultivate Compost sponsors, Cultivate also relies heavily on its customer base for fresh produce and food waste producers. This includes a variety of hospitality businesses such as coffee shops, craft beer bars, restaurants and delis.

**What benefits are generated?**

Cultivate looks holistically at the food system and invests in the development of good soils, produces food organically and has a composting business, which collects between 2-2.5 tonnes of food waste per day from the CBD that is then used on the farm.

The production of food through the Cultivate Christchurch initiative not only increases accessibility of locally grown, organic produce, but it is also a catalyst in the growth and connectivity of the local communities which Cultivate serves, and from which volunteers are sourced.

Cultivate connects different cultures and communities throughout the city, alongside helping individuals learn valuable skills around cultivation and food growth.

> ***"Food is a tool and facilitator for growing community – it is a way to combine and affect all the different cultures across the city."***
>
> *Tony Moore – Christchurch City Council*

**What were the barriers and how were they overcome?**

One of the main barriers that Cultivate Christchurch faced was gaining access to suitable, affordable and available land within the City that could be utilised for farming.

To overcome this barrier, Cultivate partnered with LIVS (Living in Vacant Spaces). LIVS is a comprehensive brokerage service for project partners and land owners. They are dedicated to activating vacant sites and spaces with creative, intriguing and entrepreneurial, temporary projects.

**How was the land/space used?**

Through LIVS, cultivate has gained access to temporarily vacant plots of land within the city in order to grow produce and compost food waste in an accessible distance to both customers, volunteers and partners.

By utilising currently vacant plots of land over the short-term, it connects land owners and developers to the idea of encouraging the evolution of Christchurch from a Garden City, to an Edible City as per the city's Food Resilience Strategy.

A new enterprise for Cultivate is the development of Urbundance. Cultivate is working with residential developers at Halswell Common, Christchurch and a developer in Hamilton, providing advice on the development of productive landscapes, greenspace maintenance and community engagement within new residential developments.

**What policies and other Council actions supported it?**

At the beginning of Cultivate Christchurch, Christchurch City Council acted as principal funder. Since then, in 2014 Christchurch City Council produced a Food Resilience Policy with the objective of 'a food resilient Christchurch with thriving social, economic and physical environments providing healthy, affordable and locally grown food for all people'. To implement the policy the Council worked with the community to produce a Food Resilience Network Action Plan.

Key actions in the two documents that could have facilitated the establishment of projects such as Cultivate Christchurch include:

- The identification of Council land for food production, the establishment of demonstration sites, protection of productive soils around the city from unsuitable development
- The Action Plan also highlighted the need for maintaining diversity of fruit and nut stock as a means of disease control / prevention.

***"The best tools to develop urban sustainable food systems are through food related policies such as the Christchurch Food Resilience Policy. This provides a direction for the Council on this topic, alongside momentum."***

*Tony Moore – Christchurch City Council*

### 4.4.2 General Overview

Small and Medium Scale Enterprises (SMEs) have been deemed to be a key driver in cities' economic and community growth (Anigbogu et al., 2014). They play a major role in driving and promoting private sector development and partnerships, alongside being a significant contributor to local employment, growth and innovation.

The involvement and contribution of SMEs to urban sustainable food systems is vital. They bring innovative solutions and thinking, diversify economic activities and also have the ability to be flexible and resilient when facing changing demands and other impacting events.

Wellington has an established and successful network of SMEs and Social Enterprises that operate within the sustainable food system, including businesses that operate in a similar fashion and trade to those mentioned within this general overview section. However it is important to note the successes of other SMEs and Social Enterprises on a national and international level, and determine in what way Wellington can learn from and build upon this success.


**Food Retailers / Distribution**

One of the most common SMEs within the Sustainable Food Network is the distribution of locally sourced food and produce via Food Box schemes and other delivery services.

Fair Food is one of these schemes - a Social enterprise based in Victoria, Australia, it supports local farms, markets and suppliers by delivering locally sourced produce to businesses and residents alike. This social enterprise uses a network of pick-up points across 70 neighbourhoods to provide affordable organic produce and groceries to those communities that are least accessible, with all profits they make going to the local environmental education programmes.

Alongside supporting the local economy, Fair Food employs new arrivals into the community such as asylum seekers, providing them with a stable source of income and connecting them to the local community. All excess or unsold produce is also rescued and donated to the local soup kitchen to help

support the most vulnerable members of the society. In addition to this, the company also runs workshops to share their skills and knowledge surrounding local food procurement and distribution.

The local governing body's role in relation to Fair Foods is as a facilitator and an enabler. Initially awarding Fair Foods with the Federal Government's Job Funding to enable it to begin operating, the local government then connected Fair Foods to the local asylum seekers placed within the community, with local producers and retailers and helped market and advertise the service throughout all accessible communities.

**Community Commercial Kitchens**

There are a number of SMEs that have developed successful business models from providing commercial kitchen spaces for start-up food based businesses, from the procurement, processing and eating of locally sourced, nutritious food.

Mission Kitchen in London offers three types of commercial kitchen spaces: shared kitchens with flexible memberships for small and independent business, private studios for established caterers and growing food brands and then shared access specialist catering equipment and dry refrigerated storage.

Not only does Mission Kitchen provide facilities, but it also offers mentorship and support. This includes; professional training through workshops, peer to peer mentorship and food business incubation, alongside desk and office space plus discounted finance, legal and marketing support. Mission Kitchen also shares its network of suppliers, partners and customers.

Lambeth Council is helping Mission Kitchen in relation to marketing and communication of the available facilities. Lambeth Council has advertised the kitchen's services on the Council's website and ensured it informs all start-ups who apply for commercial licences / grants and funding of their presence.

> ***"Regulations are restricting cottage industries for local food production. There is a need to utilise co-op kitchens to produce local products – making it in your kitchen means you can't sell it as you don't have the food hygiene certification."***
>
> *Teva Stewart – Commonsense Organics*

**Food Waste**

The 2016, Wellington Regional Waste Assessment showed that 31.9% of general waste produced is organic material. Given Wellington's large and expanding hospitality industry and growing population, the production of food waste is set to rise.

Wellington already has successful food rescue initiatives such as Kaibosh and Kiwi Community Assistance, but there is need for further investment into this sector. Food waste collection is expensive and limited to only parts of the city, which presents an opportunity for the areas of the city currently not served by the initiatives.

The collection and composting of food waste is a key aspect of the sustainable food system, and one that has been driven by innovative SMEs and social enterprises entering the space all around the world. Detroit Dirt is one of those SMEs. As a leading model of organic waste recovery and reuse with sustainability as a core business value, Detroit Dirt recycles food resources to increase awareness and actions that lead to a more sustainable community.

The method behind the business is the collection, processing and composting of food waste using an organic, aerobic process. The 'Detroit Dirt' is then sold as high quality compost for local urban gardeners and farmers.

SMEs such as this create strong community ties by connecting people, businesses and organisations whilst also raising environmental awareness, providing education around food waste as well as creating long-term employment opportunities.

The City of Detroit helped connect Detroit Dirt to local schools and education organisations in order to run food waste workshops which educate the younger generations on how to effectively reduce their food waste.

**Urban Farming Initiatives**

SMEs and Social Enterprises are a hot bed for innovative ideas to come to fruition. This is clearly demonstrated through innovative urban farming and growth initiatives that have been developed across a variety of cities.

One of these initiatives is the use of Hydroponic Freight Farms. Through this innovative methodology, high scale food production can occur from a small land area. SMEs such as Karma Farm in Baltimore, Maryland USA grow a variety of fresh fruit and vegetables, supplying local chefs, restaurants and other SMEs with locally sourced organics – reducing the timeframe of connectivity between growing and eating the produce.

Less energy demanding methods of intensive, small plot farming is SPIN (Small Plot Intensive) farms. This method of farming has been adopted extensively across urban areas in the USA. A prime example is Patchwork City Farms, based out of Atlanta, Georgia. A family owned urban farm, they work with both public and private landholders to create a sustainable and organic local food system. The farm sells seasonal produce in local farmers markets and through a Community Support Agriculture system. They are also involved in educating the community youth about plants and harvesting through volunteering and enjoying the community space.

One of the challenges faced by Patchwork City Farms is finding available and affordable land which is both suitable for farming, accessible and within the right community areas. The City of Atlanta has a land-use policy in place since 2007 for public park areas that allows and encourages the utilisation of city green space for urban farming. Through this route, the Patchwork City Farm can occupy public spaces in the heart of communities, providing a centre for connectivity and education.

### 4.4.3 Recommendations for Wellington:

The key themes identified during the above case study analysis involve collaboration between SMEs and Council, and are centred on funding, making facilities or land available, community connectivity and education / skill building, as demonstrated by the case study examples mentioned in this section. All of the SME and Social Enterprises analysed are using food as a tool and catalyst to facilitate either economic growth, life-style choices and further enhance our foodie culture. The initiatives also strive to

enhance community connectivity, share skills and decrease the vulnerability of varying demographic and cultural groups within the community.

To help increase the resilience of the food system in Wellington, the City Council has the ability to further develop its role as a facilitator and enabler for local, small businesses. This includes connecting these businesses with the right communities, facilities and other like-minded individuals, sharing skills and knowledge of both business development and urban agricultural activities, alongside streamlining the processes and increasing the accessibility of required permits and licenses that enable small food businesses to thrive.

By supporting SMEs and other business initiatives, benefits will be generated which focus on a greater number of job opportunities for both skilled and non-skilled labour: providing opportunity for many members of the community, including new migrants.

The focus case study, Cultivate Christchurch, demonstrates the activation of vacant and under-utilised land for temporary utilisation and the use of food to increase community connectivity, both of which are benefits of developing a sustainable food system that the City of Wellington would seek to profit from. Cultivate Christchurch also demonstrates the enabling role of NGOs partnering with Council.

By acting as a principal funder, Christchurch City Council has enabled Cultivate Christchurch to develop and expand, connecting communities through volunteering, and providing business with access to locally grown produce and creating a circular economy with food waste composting.

**References:**

Patchwork City Farms:

https://www.localharvest.org/patchwork-city-farms-M42214

Detroit Dirt:

https://www.detroitdirt.org/

Fair Food:

https://www.ceresfairfood.org.au/about-us/

Mission Kitchen:

http://www.missionkitchen.org/

Cultivate Christchurch:

http://cultivate.org.nz/

## 4.5 Community and Volunteering

### 4.5.1 Focus Case Study - Foodbank AU

Foodbank AU operates across Australia and is involved in multiple aspects of the Australian sustainable food system, including processing & distribution, food waste & rescue and eat & celebrate. The operations of this organisation is portrayed in the below Figure 11.


**Figure 11**: Description of the operational activities for Foodbank AU.

Source: https://www.foodbankvictoria.org.au/our-work

Although Wellington hosts numerous successful food banks and food rescue initiatives throughout the city, including the Salvation Army and Wellington City Mission, Foodbank AU provides some key lessons due to its national success and overarching collaborative approach – something Wellington and New Zealand would benefit from. Foodbank AU not only works on a national scale throughout Australia, but it also works with farmers, manufactures and wholesalers, transporting food to the areas of Australia that need it the most.

#### What has been done?

Foodbank AU is a non-profit organisation that works with a broad range of organisations to redistribute unwanted food to other charities and community groups who are focused on providing food to those in need. Established in 1992 in New South Wales, Australia the organisation has expanded to every state in Australia and the Northern Territory.

Foodbank AU have a range of initiatives which include; “Food Rescue’, which works with businesses to redirect products that are close to their ‘best before’ or ‘use by’ date, and ‘Key Staples’, where Foodbank identifies key food staples that people require and works with manufacturers to secure consistent donations from the supply chain of raw material. Foodbank’s ‘Fruit and Veg Programme’ works with growers, farmers, wholesalers, retailers and industry associations to obtain donations of fresh fruit and vegetables, which would otherwise have been sent to landfill or ploughed back into the field.

Foodbank AU also plays a key role in times of community emergency and natural disaster throughout the area. It is involved in disaster relief, providing essential supplies to support the work of emergency services in first responders, as well as providing ongoing assistance to affected communities during the recovery period.

**Who are the parties and what role do they play?**

Key supporters, donators and funders of Foodbank AU include:

- Corporate and Community partners such as Energy Australia, local sports team and ABC Radio Melbourne – providing promotion and funding
- Over 460 charity partners, community groups, schools and shelters – distributing food
- Local Councils and Government departments, including City of Whittlesea, City of Greater Bendigo and the State Government of Victoria Department of Education & Training etc. – providing funding
- Food donors – including individuals, local farms and food related businesses

Central to all of Foodbank AU's partners are the volunteers, who are the cornerstone for the workings and success of the operation. The organisation is led by a small number of paid staff but the majority of the tasks are delivered by a team of volunteers. The volunteers are involved with picking, packing and administration activities, which are designed to provide the volunteers with an opportunity to learn new skills and to meet new people while distributing food.

**What benefits are generated?**

Foodbank AU is an organisation that helps to provide those families and individuals who experience the most food poverty. The initiative increases food security throughout the local community, whilst also reducing the amount of food waste that is going to landfill. Foodbank AU contributes to well-being and food access during emergencies.

**What are the barriers and how were they overcome?**

The biggest and most restricting barrier / challenge that Foodbank identified was encouraging participation from local business, organisations and individuals who are willing to donate produce and services on a regular basis. This includes:

- food, grocery products
- raw materials
- packaging
- production and transport capability

By effectively understanding the issue and collaborating with the local governing body, Foodbank develops relationships across a broad range of industries through effective communication and networking to find common goals. Foodbank AU are also involved in encouraging the development of policies and further funding in order create a network of partners that will allow them to overcome the barriers.

This includes:

- A long-term bi-partisan food security strategy
- Incorporation of food related funding and grants within the national federal budget
- Three-year funding commitment of $10.5 million from 2018 to 2021 to help grow the current volume of 'key stable'
- Enhance tax reductions for food donations and the introduction of tax reductions for transport services related to food relief
- Annual grant to foodbank of $5.5 million to offset some costs associated with transport.

**How was the land/ space used?**


The innovation demonstrated by Foodbank AU is not in relation to land-use and space, but in how they have managed to establish a vast network of regular and reliable partners, donors and volunteers.

One of the main catalysts for this is the way in which Foodbank has approached fundraising. Foodbank AU has developed a 'Fundraising – Foodraising Toolkit' which allows individuals to decide how, why and where they can contribute towards the Foodbank's activities. The toolkit presents an A-Z of fundraising ideas, including;

- Gold Days
- Halloween Parties
- Yoga Classes
- Quiz Nights
- BBQ
- Food Runs
- Karaoke Night
- Casual Clothes Day

Additionally, the toolkit provides details of how and where individuals or companies can donate food, alongside ways in which Foodbank can authorise all fundraising or donation activities done on their behalf.

**What policies and other Council actions supported it?**

Foodbank's donors are able to manage their food safety liability under a piece of Council developed legislation called 'Good Samaritan'. This addresses wide spread concerns by most food rescue organisations in distributing food which, based on sell-by date, should be disposed of. On receipt of the food donation it is the responsibility of Foodbank to handle the products appropriately e.g. operating chillers and freezers to ensure food remains fit for consumption. Foodbank staff receives food safety training to ensure that the organisation is able to fulfil its obligation.

An incentive created by the local governing body to encourage food donations is that all contributors are issued with a Tax Donation Receipt on which the weight of the donation is registered. The donor then determines the value of the product (e.g. cost of a pumpkin or packet of biscuits) and this can be used to claim a deduction on their tax.

The local governing body undertakes the following work in support of the local Foodbank:

- aid the local Foodbank to make connections with food suppliers including fresh fruit and vegetables and grocery products.
- work with the local Foodbank to help obtain the permits that they require to manage food.

### 4.5.2 General Overview

Community and volunteering is one of the core pillars from which a sustainable food system is able to develop within an urban environment.

Understanding and learning from examples of successful community and volunteering sustainable food initiatives, allows Wellington City Council to better understand how it can continue to enable and support both new and existing community and volunteering based food initiatives throughout the city.

**Food Sharing Exchanges**

"Food sharing" is a method of collaborative growing, cooking eating and/or distribution of food, as well as the sharing of food-related skills, spaces and tools.


Christchurch City Libraries have adopted the philosophy of food sharing through their 'Great Library Seed & Plant Swap' programme. Run by volunteers but organised by the City Library, the seed swap exchange is an event where local and private gardeners meet to exchange seeds of both flowers and edibles. It provides consumers and gardening enthusiasts - who wish to grow their own food, but can't necessarily afford buying seeds - with the ability to grow healthy and organic food in their own private gardens.

As a part of the seed exchange, the City Library also educates the community in methods of how to organically grow their seeds. As part of this education effort, visitors are taught by volunteer 'expert' gardeners not only just to grow, but also how to preserve cultural heritage and natural biodiversity.

The seed exchange benefits the wider sustainable food system by activating privately owned green space to grow edible produce, providing a social food space and bumping space for locals, therefore increasing community connectivity whilst enhancing the local skill set and knowledge surrounding food heritage, biodiversity and gardening.

> ***"Food re-use and rescue is normally only implemented on larger scales, but there is a need to encourage a small scale, online platform for food exchange where spare food is shared locally, accessing the residential market"***
>
> *Tony Moore – Christchurch City Council*

**Community Gardens**

One of the most commonly established volunteer and community based sustainable food initiatives on a global scale are community gardens. The concept of a community garden is where an individually managed or shared plot of private or public land is collectively worked by a group of individuals.

Moving away from the standard community garden approach, the Beacon Community Food Forest in Seattle, Oregon, has designed and managed an edible urban forest garden. This initiative simultaneously grows organic, accessible food whilst also rehabilitating the local ecosystem.


**Figure 12:** The Full 8 Acre schematic for the Beacon Food Forest Project.

Source: https://beaconfoodforest.org/project/

Inspired by the concepts of foraging, a food forest is a gardening technique or land management system which mimics a woodland ecosystem with edible trees, shrubs, perennials and annuals. Working in collaboration with the City of Seattle's Office of Sustainability and Environment, the farm aims to mimic a natural forest environment, whilst increasing the resilience of the sustainable food system.

By occupying underutilised Seattle Public Utilities (water, sewage, drainage and garbage services) land, alongside accessing the management expertise of the Seattle Parks and Recreation Department, Beacon Community Forest have to establish a location and develop the skills required to effectively grow and manage the food forest.

Beacon Food Forest has gained access to a variety of grant funding that has been made accessible by the local governing body, including:

- A "Small and Simple" grant from the Seattle Department of Neighbourhoods which supported the schematic design and creation of the forest.
- A City Fruit and ACT Trees Grant enabled the purchase of small forest of bare root trees, and workshops on fruit tree care for the community which were used to educate people on food forestry and stewardship of trees on public lands.
- A Sustainable Path Foundation grant allows the installation of a series of permanent signs that explained many of the scientific and social benefits to create an edible forest garden in an urban setting.

***"What urban farming in Wellington needs most is expertise. At the moment most of the growers are just enthusiasts and that is not enough to run a business. The best thing Council can do is fund quality training."***

*Teva Stewart – Commonsense Organics*

Some communities, such as the Incredible Edible team in Todmorden, West Yorkshire, UK, take an urban gardening approach to help bring their communities together. As self-branded 'food freedom fighters', the Incredible Edible team bring together a mix of demographics across the community to plant edibles throughout the town, all of which are free to be picked by all. This is a scheme so successful it has been rolled out by local governments and communities globally, and can be compared to the "Food is Free" initiative launched by the Sustainability Trust in Wellington.

> ***We have so much to learn from Todmorden case study. Urban agriculture completely transformed how people interacted with each other."***
>
> *Lydia Mabbett – Commonsense Organics*

**Food Co-operatives**


While food banks and food rescue schemes have been very successful, they can have unintended social outcomes. Accepting free food can be a potentially disempowering experience. Food co-operatives have been an attempt to allow people to take their food choices in their own hands. A specific example of this empowerment being successful is the growth of Wesley Community Action food co-op in the Wellington region.

> ***"The triangular relationship with Wesley Community Action, NGO, Regional Public Health and a host community has been highly successful. RPH have provided start-up funding, staff support and comms. Wesley Community Action employs a regional coordinator/buyer and runs at a deficit in supporting these communities. The co-ops are made up of exceptional volunteers in each community who work together to pack and see provided affordable accessible fruit and vegetables locally. You can only expect so much from these teams and the coordinator role is particularly big. Rather than a hand out this model is a hand up model and people leave with real dignity as they purchase their own food at affordable prices."***
>
> *Sallie Calvert – Wesley Community Action*

A similar initiative is an Organic Greengrocer based in Nelson, which became a community owned co-operative, whose focus was to create a resilient local community and provide them with affordable organic produce.

The initiative's first aim was to raise $67,000 to buy stock, fittings, goodwill and to provide $10,000 of working capital. On the date of purchase in 2016, $52,400 had been raised with the remainder to be repaid over a 3 year period.  The funds for purchase were raised by households buying a share

(membership) in the business for $365. This gave the household a discount on their future purchases, one vote in relation to the management of the business and potentially dividends could be paid in the future if the business makes a profit and the board decides it is appropriate. As a result over 100 families are now in the co-op.

The co-op is managed by an elected board and the shop has paid core staff supplemented by volunteers from the community.

While the co-operative is primarily run to provide organic produce for its members the shop is open to the public and aims to provide a location that local people can sell their produce, run workshops and community gatherings around the theme of resilient organics. This includes EcoVie night where the community share a meal, swap seeds, share garden advice and watch a movie.

The published Nelson 2060 strategy, which lays out a community-led vision for Nelson 2060, indicates ways in which the Council can further their support for both Nelson Organics and other sustainable food distributors within the city. This includes:

- Match funding community projects
- Share and promote success stories
- Champion projects on a Sustainability Forum
- Align the region's Economic Development Strategy with Nelson 2060

***"The co-ops have grown through many forms of marketing with word of mouth and personal recommendations being on top. This shows the community as both the face and engine behind it. Vital in the success of the initiative is the invisible infrastructure Wesley Community Action and Regional Public Health have provided. Councils can play a role by providing micro grants in supporting their communities helping them stay sustainable and facilitating connections."***

*Sallie Calvert – Wesley Community Action*

### 4.5.3 Recommendations for Wellington

Wellington is in a fortunate position where it is has a baseline of established, local community and volunteer supported initiatives which maintain and enhance a sustainable food system throughout the city.

Wellington City Council could continue to help expand and support these local initiatives, via the following pathways:

- Financially support the initiatives by increasing available funding and grants specifically for sustainable food related initiatives
- Help increase the knowledge and skill set of volunteers by promoting and hosting educational workshops and programmes around sustainable food behaviours and the skills required for growing, harvesting and processing food in an urban setting
- Facilitate management and business mentoring for community based initiatives in order to facilitate and support their growth and development

**References**
For more in-depth information on the case studies referenced in this section, please refer to the below links:

**For more Food Bank Victoria:**

https://www.foodbankvictoria.org.au/who-we-work-with/government/

**Beacon Food Forest:**

https://beaconfoodforest.org/

**Christchurch Seed Exchange**

https://my.christchurchcitylibraries.com/blogs/post/the-great-library-seed-and-plant-swap-2018/

**Nelson Organic Greengrocers**

**https://www.nelsonorganiccoop.nz/about**

**Nelson 2060**

http://www.nelson.govt.nz/environment/sustainability/nelson-2060/

**Foodbank AU:**

https://www.foodbank.org.au/

## Appendix A: Interviewees

**Tony Moore** – Sustainability Advisor for Christchurch City Council

*18 years' experience –Chair of Sustainable Living Education Trust, Chair of the Food Resilience Network.*

**Bronwen Newton** - Member of Urban Habitat Collective Building Community.

*Co-Founder of Community Orchards and Lawyer by Trade.*

**Sallie Calvert -** Wesley Community Action

*5 years overseeing veggie co-ops throughout the city.*

**Teva Stewart -** Merchandise Manager at Commonsense Organics

*Spent 13 years at Commonsense and member of the leadership team. He is responsible for all product related matters in Wellington – pricing, range, placement and training.*

**Lydia Mabbett** – Corporate Trainer,

Commonsense Organics and Urban Farmer at KaiCycle.

**Frank van Steensel & Josje Neerincx** – owners

*Wairarapa Eco-farm*

## Appendix B: - Current State Overview

### Introduction

This following section provides a high level overview of what known activity is occurring throughout Wellington City – through all parts of the sustainable food cycle. A complete review of all current activities was outside of the scope of this research and so only initiatives known to the Council and interviewed specialists at the time of this report are included.

The tables seen throughout section 3.0 of this report are detailing a quantitative analysis undertaken from the matrix of initiatives produced. For this, the benefits experienced for each initiative, were analysed by a check-box exercise. This check-box exercise identified the relevance of the eleven benefits listed below, providing the quantity of benefits experienced per initiative:

- Affordable and Healthy Food
- Accessibility of Food
- Jobs and Economic Activity
- Low carbon-less transport emissions
- Water quality and attenuation
- Reduced chemical use
- Waste Reduction
- Food Education
- Enhance local natural environment
- Emergency gathering spaces and supplement food
- Community Connectedness

### Growing Food & Foraging

As growing initiatives, community gardens have one the largest presences throughout the city - at least 16 active gardens are open to the wider community, and many more communal gardens are present throughout the city. These are closely followed by fruit tree orchards, urban farms and bee keeping initiatives. These initiatives range from community and volunteer operated programmes to small / medium sized enterprises and businesses.

| Initiatives: | Number of Initiatives | Benefits per Initiative |
|---|---|---|
| **Urban Farm** | 4 | 9 |
| **Food Foraging** | 1 | 6 |
| **Community Gardens** | 16 | 9 |
| **Bees** | 3 | 9 |
| **Fruit Trees  Orchards** | 5 | 8 |

**A.1:** Growth - Number of initiatives and benefits experienced.

Community gardens have the largest presence throughout the city; closely followed by fruit tree orchards, urban farms and bee keeping initiatives. These initiatives range from community and volunteer operated programmes to small / medium sized enterprises and businesses.

Some examples of the community gardens include Mokai Kainga in Owhiro Bay, Newtown Community Garden and Kelburn Student garden; food foraging Initiatives include Our Terrier and bee keeping includes companies such as Local Flavour – Urban Honey Co.

Wellingtonians forage for blackberries, mushrooms, as well as native leaves and kai moana. It is difficult to assess the scale of this activity. Foraging is currently discouraged by the City Council due to concerns around food safety due to the spraying of weeds with Roundup.

**Benefits**

It is widely accepted that Wellington does not have the capacity or ability to grow enough food to feed the city. However key benefits associated with growing and foraging for food were identified as:

- Greater community connectivity as a result of shared activities and bumping spaces.
- Increased social interaction across cultures and demographic groups
- A growth in skills and knowledge surrounding the growth and management of food.
- Increasing the accessibility of fresh produce.
- Caring for plants or animals increases sensitivity to the natural environment and renders people more likely to adopt environmentally responsible behaviours.

**Barriers**

Barriers identified in this research in relation to growing and foraging for food in Wellington include:

- Access to suitable available land
- Community engagement and volunteer retention – volunteer burnout due to low funding and negotiating group relationships can be challenging
- Local climate and topography, including soil quality
- Cost of land, technology and infrastructure
- Lack of skills and knowledge around growing
- Conflict with maintaining natural biodiversity and the potential impacts on local ecosystems

## Food processing

The presence of processing facilities in Wellington is a part of the sustainable food system that has seen growth in the recent years as part of our "foodie" culture. Microbreweries and coffee roasters are the most popular, but there are also others such as bakeries, peanut butter production, etc. Community kitchens are initiatives focused on bringing the whole community together and enabling people who may otherwise experience entry barriers (for example people from lower socio-economic backgrounds and new migrants) to develop micro-businesses focused around food.

| | Number of Initiatives | Benefits per Initiative |
|---|---|---|
| **Shared Commercial Kitchens** | 1 | 5 |
| **MicroBreweries** | 6 | 6 |
| **Coffee Roasters** | 17 | 7 |

**A.2:** Processing. Number of initiatives and benefits.

For the purpose of this assessment, the only craft breweries recognised were those listed on the "Wellington, Absolutely Positively" website: The Garage Project, Parrot Dog, Fork & Brewer, Tuatara and Choice bros. In terms of the number of observed coffee roasters, this includes companies such as Rich Coffee Roasters, the Immigrant's Son and L'Affare Roastery.

This scan was only able to identify one shared commercial kitchen in Wellington: The Crave Kitchen in Kilbirnie. Wellington does also host Pomegranate Kitchen, which is a social enterprise and registered

charity that provides a catering service for Wellington. They focus on employing people from a refugee background, to cook authentic food which is organic and eco-conscious.

**Benefits**

A thriving and diverse food processing industry provides the city with a multitude of benefits. These include:

- Local job and skills
- An increase and diversification of economic activity
- Reduction in transport emissions associated with the products
- Reduction in the use of preservatives (shorter route to customers)
- Greater accessibility to locally manufactured products
- Food processing capability in emergency

**Barriers**

Barriers that have been experienced in the processing of sustainable foods and produce include:

- Affordability of local produce over bulk-buying supermarket goods
- Skills and knowledge surrounding business management and technical expertise required within the industry

**Distribution and Retail**

Distribution and retail make up the largest number of initiatives included in our sustainable food system stock-take.

| Initiative Type | Number of Initiatives | Benefits per Initiative |
|---|---|---|
| **Farmers Markets** | 4 | 7 |
| **Street Markets** | 2 | 7 |
| **Organic Retailers** | 2 | 7 |
| **Food Banks** | 13 | 7 |
| **Community Fridges** | 2 | 6 |
| **Food Co-ops** | 11 | 6 |
| **Home / Box Delivery** | 6 | 5 |

**A.3:** Distribution and Retail, Initiatives and benefits.

The most common initiatives are food banks, food co-ops and home delivery / food box services.

Both food banks and co-ops, such as The Wellington City Mission and Food Together Co-op, alongside Welsey Community Action Co-op strive to increase the affordability and accessibility of fresh food and produce, empowering the more vulnerable parts of society. Whereas those initiatives such as organic retailers – Commonsense and home/box delivery services such as the Naturally Organic Food Box Scheme, offer locally sourced organic produce to a less price sensitive audience.

**Benefits**

Providing access and a healthy food choice across Wellington's society delivers a number of different benefits:

- Increased affordability and accessibility for fresh fruit and vegetables.
- Increasing the health and wellbeing of more vulnerable parts of society by supporting healthier food choices.
- Reduction in transport emissions associated with distribution due to shorter transport distances.
- Market for organic farming, reducing the amount of chemicals used in growth and production.
- Reduces vulnerability of Wellington traditional food distribution network associated with two key retailers Foodstuffs and Progressive who have their distribution centres in Grenada North.

**Barriers**

Barriers that have been experienced in the distribution and retail of sustainable sourced food produce include:

- Required community-buy in.
- Volunteers burn out due to low funding.
- Lack of effective communication, marketing and advertising of existing initiatives.

**Consumption, Hospitality & Celebration**

The consumption and celebration of food is a core aspect of Wellington's culture, with the city accommodating a vast and diverse hospitality sector, alongside hosting multiple food related celebrations, such Wellington on a Plate, World of Wearable Art – Edible Art and Local Food Week having regular slots in the annual events calendar.

| Initiative Type | Number of Initiatives | Benefits per Initiative |
|---|---|---|
| **Food Related Events / Festivals** | 3 | 3 |
| **Food Sharing Facilities e.g. BBQs** | 6 | 3 |
| **Soup Kitchens** | 1 | 5 |
| **Community Centres** | 25 | 6 |

**A.4:** Consumption, Hospitality & Celebration - Initiatives and benefits

Food sharing facilities include a network of Council maintained BBQs, located in parks and reserves for example Shorland Park, Island Bay, Otari Bush and Grasslees Reserve.

The research only identified one soup kitchen in Wellington - Compassion Soup Kitchen – Te Puaroha. This organisation provides a wide range of benefits which could be either extended or replicated in other vulnerable areas.

Wellington also hosts a number of community centres around the city, who are engaged in numerous food related activities, bringing people together to share food, reducing social isolation in the process.

There is an increasing range of restaurants and cafes that serve and promote healthy sustainable food options and favour local produce, but this research did not cover this activity.

### Benefits

The benefits that are generated by the presence of the above initiatives within the city are as follows:

- Soup kitchens improve access to warm, healthy cooked meals on a regular basis for the homeless and other vulnerable parts of society.
- An increase in social interactions and community connectivity through the use of communal facilities.
- Increased awareness and education of the food choices and opportunities throughout the city as a result of the annual events.
- Tourism growth and other economic benefits associated with restaurants and cafes.
- Increase in economic activity.

### Barriers

Barriers that are known to have been experienced in the distribution and retail of sustainable food include:

- Locally sourced, organic produce comes at a higher price.
- Organisations such as foodbanks rely on continuous community support, volunteers and donations to run.

## Waste Disposal, Compost & Food Rescue

Wellington has a number of volunteer based or SME initiatives that are dedicated to diverting the city's private, public and commercial food waste away from landfill sites. Not only do these initiatives focus on food waste, but they are concentrated on reducing waste from the sustainable food system as a whole, including packaging and other associated waste materials.

| Initiative Type | Number of Initiatives | Benefits per Initiative |
|---|---|---|
| **Composting** | 5 | 5 |
| **Food Rescue** | 4 | 6 |
| **Packaging** | 1 | 6 |

**A.5:** Waste Disposal, Compost & Food Rescue - Initiatives and benefits

Food composting businesses such as Kai Cycle, collect food scrapes from homes and commercial properties across Wellington to be composted at their Urban Farm and improve their soils. Kaibosh has an extensive network of donor supermarkets and retailers from which food redistributed to charities across the city. Freestore collects unsold food from cafes and restaurants at the end of the day and distributes it to homeless and low income people. Retailers such as Nude Grocer and Commonsense Organics strive to reduce food waste by delivering food produce in a range of re-usable jars and containers.

### Benefits

By reducing the amount of food waste sent to landfill and consequently increasing the amount of composting and food rescue undertaken throughout the city, the following benefits have been experienced:

- Food composting initiatives such as Kai Cycle have generated local jobs and boosted economic activity.
- Food rescue prevents unnecessary food wastage and provides affordable and healthy food choices to the more vulnerable and in-need aspects of society.
- With an increase in composting, urban farms and community gardens have a greater supply of good quality, fertilised and organic soil as opposed to using chemicals / fertiliser.
- The currently active initiatives have raised awareness around food waste and educated individuals in minimising waste.

**Barriers**

Barriers that are known to have been experienced when implementing waste disposal, composting or food rescue initiatives include:

- Changing habitual landfill disposal behaviours
- Building community engagement within the initiatives
- Lack of financial or legal incentives to composting and food rescue
- Food safety issues surrounding the donation of food close to its 'sell by' or 'use by' dates.
- Lack of communication and awareness around the food waste choices

**Policy, Education and Promotion**

Policy, education and promotion are key enablers of sustainable food system.

There are a number of educational initiatives in Wellington including Discovery Garden in the Botanical Gardens, striving to teach children about plants and develop their interest in the natural environment, specifically in the urban environment. Conscious Consumer and Garden to Table are other initiatives that increase the awareness of sustainable food choices, where food comes from, and how it can be prepared.

The initiatives that have a secondary function of education, such as community gardens that run workshops have not been incorporated here.

There are no policies wholly dedicated to sustainable food system in the city but the following have some aspects that either enable them or create barriers. The policies noted include:

- The District Plan
- Towards 2040: Smart Capital
- Our Natural Capital
- Resilience Strategy
- Community Gardens Strategy
- Town Belt Management Plan

| Initiative Type | Number of Initiatives | Benefits per initiatives |
|---|---|---|
| **Education** | **4** | **4** |
| **Policy** | **6** | **7** |
| **Promotion** | **2** | **4** |

**A.6:** Policy, Education and Promotion - initiative and benefits.

**Benefits**

Food promotion and education initiatives provide the following benefits:

- Increased awareness of urban sustainable food systems and individual actions/choices that help facilitate and encourage its development.
- Promotion of good spending behaviours.
- Increased awareness of the environment and how an individual can impact and influence it.
- Generates greater community connectivity and integration.
- Increases the skill set and knowledge in relation to agriculture and the growing and management of plants and edibles.

**Barriers**

Barriers that are known to have been experienced in the development of education, policy and promotional activities in relation to the sustainable food system are as follows:

- Policies not designed to accommodate the sustainable food system can hinder the availability of land within the city.
- Some policies can have conflicting objectives e.g. urban agriculture and biodiversity, although policies which cause this are often required by statue.
- Lack of available funding and grants to enable and support educational activities.
- A lack of specific and focused food strategies which incentivise and enable sustainable food related initiatives.

## Appendix C: Food Accessibility and Land Opportunity Mapping

This land opportunity mapping presented is the initial workings of the Council, produced with what data sets are readily available.

Although currently limited in what analysis can be undertaken, they show the future potential of GIS mapping and how it can effectively contribute towards the development of the sustainable food system across Wellington.

The maps are focused on two key factors, which are land opportunity and food accessibility. The maps are laid out below, showing their title and which data sets they include:

- Food Accessibility Map 2: Grocery Retailers, Population Density – Wellington City
- Food Accessibility Map 3: Grocery Retailers, Population Density – CBD
- Food Accessibility Map 5: Grocery Retailers, Deprivation Index – Wellington City
- Food Accessibility Map 6: Grocery Retailers, Deprivation Index – CBD
- Land Opportunity Map 1: Emergency Assistance Centre, Open Green Space, Contaminated Land – Wellington City
- Land Opportunity Map 2: Open Green Space, Wind Zones – Wellington City
- Land Opportunity Map 3: Open Green Space, Land Slope – Wellington City