

Identify ways in which the St Albans community can increase their local food resilience in an ever increasing urban environment.



St Albans Uniting Parish Church Garden - Photo Courtesy of Ryan Hepburn

By Sarah Saxon and Ryan Hepburn on behalf of the St Albans Residents Association

12 June, 2014

Table of Contents

1. Executive Summary.....	3
2. Introduction	4
3. Literature Review	5
3.2 <i>Why do we want food resilience?</i>	5
3.3 <i>What works well?</i>	5
4. Methodology	6
5. Case Studies.....	8
5.2 International Examples.....	8
5.3 New Zealand Examples	8
6. Current Situation.....	9
6.2 Skills in the Community	10
7. Results	11
8. Community	13
9. Areas for Improvement	13
10. Limitations	14
11. Conclusion	16
12. References	17
13. Appendices	18

1. Executive Summary

The St Albans community has a unique opportunity to implement food resilience programmes in the wake of the 2010 and 2011 earthquakes, but there are a number of barriers to doing this which must first be overcome. Examples from overseas, notably the Hayes Valley Farm in California, show that when communities rally together and work in harmony with city councils and other authorities they are more likely to achieve food resilience.

St Albans has a good base already from which to build. A community garden exists while others grow their own produce at home, and until recently the community had a market at which they would share produce. Schools and churches in the area have their own gardens which they use to grow and distribute produce, and in addition to this there are a number of residents with relevant skills such as gardening and botany.

There are a number of ways St Albans could move forward in terms of food resilience with options including curb-side gardening, implementation of green roofs, utilizing vacant sections as well as portions of parks, and establishing food-sharing mechanisms. Unfortunately there are barriers to this resilience which include a declining will to volunteer, lack of funding from the Christchurch City Council (CCC), and a poor relationship with local authorities.

The results of our survey and interviews showed a dichotomy of views. Many of those we interviewed saw the benefits of food resilience, however, these results were skewed by the fact these people were interviewed at the community garden working bee, or because they had specific knowledge surrounding growing food. In an attempt to reach out to the wider community we compiled a survey seeking their views, distributing it through the St Albans Residents Association's (SARA) Facebook page. Unfortunately the response rate was low, and from those who did complete it there were few clear trends.

While there is a will to establish food resilience in St Albans it seems likely that anything on a larger-scale will not be feasible for several years until the community, and the city as a whole, has had more time to get back on its feet. Once this happens and more money is available both at a personal and on a city-wide level, it seems likely that more people would be able to volunteer. If, in this time, SARA is able to mend its relationship with the CCC then the pieces will be in place and St Albans will be able to initiate food resilience programmes on a larger scale.

2. Introduction

SARA is an organization established in 1996 which aims to improve their local community. In 2013, SARA proposed a 20 point plan which would revitalize the community over the coming decade. One of these points was a “community food production programme” which aims to “promote local food growth and consumption”, with an emphasis on food sharing. The community has many gardeners and a wealth of experience to pass on to other volunteers, but the challenge lies in finding a way to produce food in a very limited space. Some of the possible options to overcome this problem include green roofs and curb-side gardens, while land vacated due to the earthquake remains a possibility, albeit one riddled with legal hurdles. Increasingly, an important resource can also be found in the examples of other cities around the world. The success and failures of their food resilience initiatives can point SARA in the right direction, while helping them to avoid the pitfalls others have experienced.

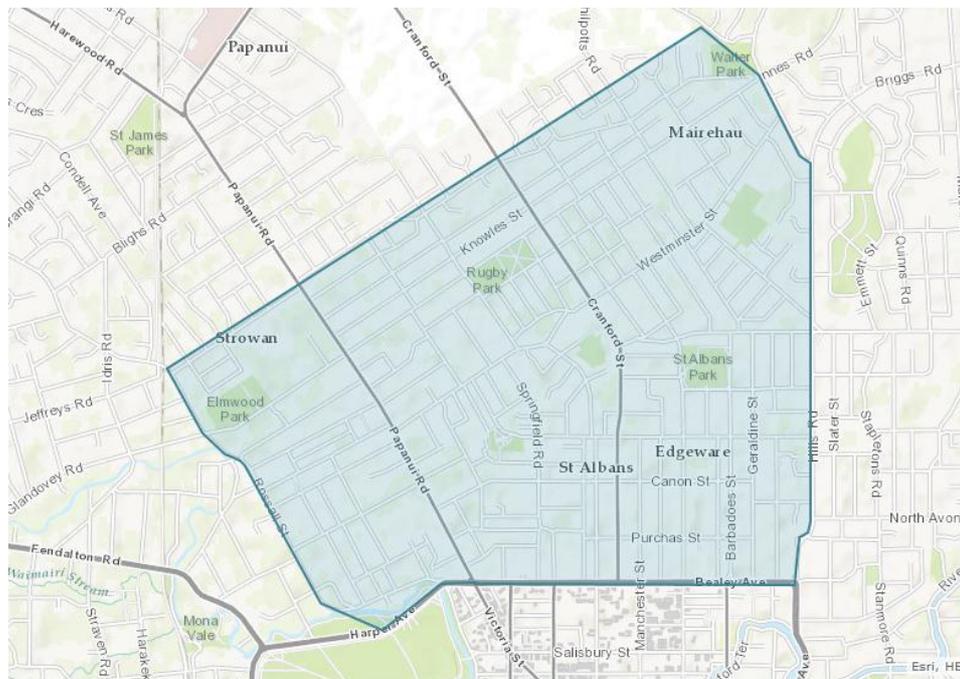


Figure 1 - Map of St Albans Area (ESRI, 2014)

The St Albans Area is located immediately north of the Central Business District. The area is mainly residential, with Edgeware Village at the centre forming the main hub for retail, hospitality and amenities. The population estimate was 16,000 in 2006, however this has likely changed due to the 2011 earthquakes. The area also contains four primary schools and a number of well used parks and reserves such as Abberley Park, Malvern Park and ASB Park (Christchurch City Council, 2012).

3. Literature Review

3.2 *Why do we want food resilience?*

There are many motivations for implementing food resilience programmes. Globally there has been a significant rural to urban drift resulting in a greater distance from farm to plate for many people. A regular basket of fruits, vegetables, meat and grains which is imported can easily use 4 times the amount of energy and 4 times the amount of greenhouse gasses to produce and transport, compared to locally grown food (Halweil, 2002). Global transport of food often depends on packaging, refrigeration, preservatives and additives with potentially higher costs than the local market (Halweil, 2002). The availability of good food choices in urban areas, both in the developed and developing world is decreasing (Halweil, 2002) rendering local food advantageous, as growing food provides fresh produce, additional income and economic benefits which stay within the community (Holland, 2004). This provides resilience though lowering the reliance on vulnerable international markets.

Additionally, the greenspace created in urban areas to grow community gardens has many social benefits. It allows places for communities to gather and interact, while also serving as a tool for training, research and skill development (Holland, 2004). Furthermore (Buttery et al., 2008) reports physical and mental health improvements as a result of urban agriculture. Gardening programmes in schools has been shown to help children live healthier, as it acts as a tool for teaching better eating habits (Koch, Waliczek, & Zajicek, 2006). It has also been shown to improve academic performance (Graham & Zidenberg-Cherr, 2005), cooperation, volunteerism and communication skills, amongst others (Robinson & Zajicek, 2005).

Food resilience is highly relevant for Christchurch, as there were large concerns for food security following the 2011 earthquake. With many supermarkets damaged and closed and many roads impassable, access to food was an issue for many in Christchurch (New Zealand Doctor, 2011). Supermarkets that did remain open rapidly sold out of essentials such as fresh milk and bread (New Zealand Doctor, 2011). This situation taught the city about the need for self-sufficiency, which local resilient food networks can play a huge part of.

3.3 *What works well?*

One of the most important factors contributing to successful urban farming and gardening practices is having enough local interest in the projects. Sustainability programmes and initiatives have a tendency to engage and support only a small

amount of the population. Projects need to engage the rest of the community by finding out what drives participation and by targeting individual sociocultural groups (Franklin, Newton, & McEntee, 2011). Lack of space, time, money and interest are often cited as barriers to participation in gardening and urban farming behaviours (Marsh, 1998)**. Cultural factors should also be taken into consideration. It has been noted by (Buttery, et al., 2008) that immigrants can associate the practice with economic hardships and social inferiority, affecting their willingness to participate in urban farming practices.

Other studies have found that successful food resilience programmes are those which match the communities diets with the local availability and seasonality of produce, and this can be done by creating local food guides and menus with recipes for using local seasonal food (Feenstra, 2002). Another important aspect, especially for local food markets, is establishing good marketing strategies for local food, ones that convince people that supporting local food is the better choice and delivering with high quality products (Feenstra, 2002).

Finally, policy which is supportive of food production, processing and consumption is important for successful local food programmes. Successful community food systems projects that were investigated by (Feenstra, 2002) had been involved in policymaking at some level. Such involvement includes analysis of land use patterns, helping residents to evaluate land use policy and how they may want to change these. They also note that taking good data and creating a good story to show the success of the projects can help to convince the policymakers to change policy (Feenstra, 2002).

Other literature has suggested that more can be done by planting trees which have the purpose of edible fruits and nuts. (Buttery, et al., 2008) suggests using the local community and in particular schools to plant, harvest and maintain the trees. They can be used as a teaching tool and the produce can be shared amongst the community or sold to buy and maintain more. Their suggestions include planting on streets, parks and cycleways. They have also noted that parks and private gardens are underutilised, which is another area where growing can be encouraged. However, commercial food growing on urban fringes is still important and should be encouraged(Buttery, et al., 2008).

4. Methodology

We conducted both formal and informal interviews both over the phone and face to face with current and previous members of the St Albans community who are

prominent in the sustainability and gardening scene, including Helen Ross, Matt Morris and Peggy Kelley. Bailey Perryman from Garden City 2.0, who is a well-known leader in the Food Resilience Network was also contacted. The questions asked focused on the elements which make food resilient communities, barriers to food production, specific current projects and potential areas for improvement in St Albans.

On May 15 we volunteered in the Packe Street Community Garden and had conversations with other volunteers. In many ways these informal conversations were immensely helpful. We learned a lot about the St Albans area, about food resilience in general, and about what relevant skills people in the community had.

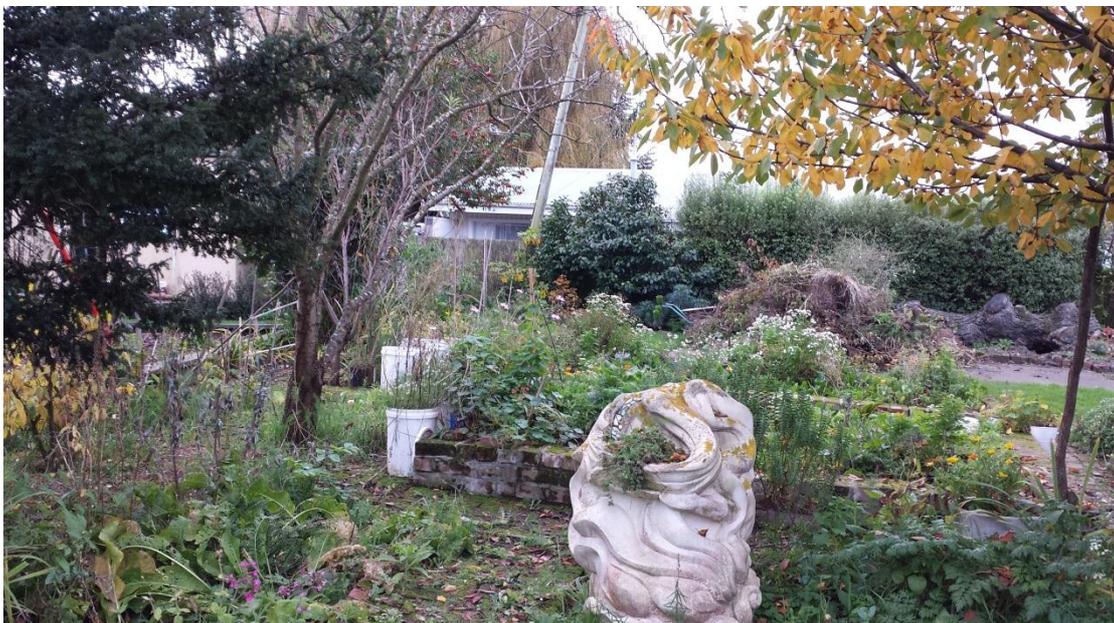


Figure 2: Packe Street Community Garden. Courtesy of Sarah Saxon

Bailey Perryman shared his opinions on the benefits of local food production and how to get people involved as well as their various motivations for doing so. Conversely, he also shed light on the inhibitors to getting involved in local food production initiatives, such as a lack of land ownership, so that we could look at ways to reduce these hurdles.

Additionally, we created a nine question survey and distributed this using the St Albans News facebook page. The survey questions asked the participants about their basic demographics, their gardening behaviours, knowledge, the availability community assets and about places which they would like to see food resilience programmes happening. The survey unfortunately yielded quite a low response rate of just 11, meaning that trends were very hard to establish, and this is something we will discuss later.

5. Case Studies

5.2 International Examples

Incredible Edible Todmorden is situated in Todmorden, a market town in the north of England. Todmorden is famous for the amazing amount of raised garden beds in public spaces, which are maintained by a group of volunteers but open to the public. Occasionally they have had permission to plant in places and other times they have been acts of “guerrilla gardening” (Warhurst, 2012). Edible gardens now exist at the police station, doctors practice, estate gardens, train station and even a graveyard, amongst others. Walking tours of the edible gardens have become a tourist activity, attracting the attention of garden and sustainability enthusiasts worldwide (Warhurst, 2012). Not only does the Incredible Edible Todmorden programme grow gardens, they aim to also teach the community about food and where it comes from, run permaculture classes, local school growing and cooking classes and teach bee keeping. Additionally, they hold an annual harvest food festival where growers showcase the produce they can grow in the area and show others the food they can make (Incredible Edible Todmorden, 2014). This inspires and encourages a culture of local food production and consumption.

The Hayes Valley Farm, in San Francisco is a good example of utilizing available space for urban farming. Opened in January 2010, on the site of a building demolished due to earthquake damage, the farm was part of an interim-use land agreement with the local government. This lease was developed to facilitate the farm in the years before construction was due to begin on the site. The 2.2 acre farm was financially supported by the San Francisco Parks Alliance (SEPA), but the majority of input came from thousands of volunteers. These volunteers worked to promote awareness of local food production as well as strengthening of community ties. With the closure of the farm many of these volunteers have taken the skills they made and turned them to starting new urban farms and community gardens (Hayes Valley Farm, 2013). St. Albans finds itself in a similar situation. Many houses were ruined by the earthquake. Some have been demolished and some are due to be demolished in the near future. Houses will be rebuilt on these sites, but in many cases this will take a number of years. The local government can learn from the city of San Francisco, and develop interim-use leases which will facilitate local food production and community bonding.

5.3 New Zealand Examples

New Zealand has a great source of food resilience examples on the Localising Food Project website. The group toured the nation documenting over 200 examples of food resilience, ranging from wild foraging, school gardens, open orchards and super productive home gardens. One of these was the story

of John Stansfeild also known as the “Dancing Gardener” on Waiheke Island, who began a local food culture in the community (The Localising Food Project, 2014a). Sharing food has now become a fundamental community building tool on the island. John had a giant pumpkin growing on his front lawn which attracted the attention of many. When it was fully grown he invited a group of forty locals to share with him, and this gathering began the local neighbourhood association. He has also been instrumental in setting up a successful roadside garden on a large patch of unused land in front of his house (The Localising Food Project, 2014a). With councils having more limited budgets, the maintenance of roadside reserves is a lower priority, and therefore growing here shows that there is a much more beneficial use of the land. The whole street is involved now is maintaining the garden and passers-by are free to collect it as well. They also have a sharing table at the local market for growers to share their extra produce and exchange recipes and tips with others (The Localising Food Project, 2014a).

In Nelson, their open orchards are a great example of council’s supporting local food initiatives. They have planted hundreds of fruit and nuts trees in public spaces including parks, reserves and in the town centre. The Stoke open orchard is one of the larger examples and is located in a residential area where there is a lack of space for growth of fruit trees. The orchard is used as a community tool for teaching immigrants about the food of New Zealand and about sustainability as well as for recreation (The Localising Food Project, 2014b).

6. Current Situation

The St Albans Uniting Parish Church has a flourishing garden which regularly feeds 60 people within the parish, and surplus is donated to the Christchurch City Mission. Its raised bed garden has recently won the title of Best Community Garden in the Sustainable Edible Garden Awards for the St Albans/ Shirley Ward (Emma Twaddle, personal communication, 10 May 2014).

The St Albans Fruit and Veggie Co-Op runs as part of the Christchurch Fruit and Veggie Co-Op, who source local seasonal fruits and vegetables direct from the market. 2100 bags of fruit and vegetables are packed by volunteers and supplied within Christchurch and of these 175 are in the St Albans/ Shirley area. The cost of a bag is just \$10 and each bag comes with a recipe from the Christchurch District Health Board, as this is part of the Public Health initiatives. There are 5 pick-up points in St Albans at churches and schools. The aim of the co-op is to get healthy food to families at a reasonable price (Twaddle, 2014).

Garden City 2.0 provides a similar service with organic fruit and veggie bags. The price of these is slightly more expensive, however, it is organic certified and they

have a variety of bag sizes. Currently there is only 1 pick-up point for these in the area on Bealey Ave, but people can register interest in hosting a pick up point.

Packe Street Park and Community Garden was established in 1996, after the CCC acquired the site as part of their available land for parks and reserves. This was then given to the St Albans community to start a park and community garden. Peggy Kelly has been working with the garden since the beginning, and helps to coordinate the working bee every Thursday afternoon. The garden is not fully edible, it includes an eclectic mix of fruit trees, vegetables, herbs and ornamental plants. One of the biggest challenges for the gardens is individuals overharvesting and harvesting vegetables such as lettuce and silverbeet before it is able to grow large enough to keep sprouting after it has been picked, meaning that there is little left for others to enjoy. However, many locals also give back to the garden by making donations of plants and equipment which adds to the variety in the park. The garden has a handful of regular volunteers, however, the amount of people in the garden week to week varies, especially seasonally (Peggy Kelley, personal communication, 15 May 2014). As the name suggests, this is more than just a working garden, it also contains a small playground and tree house for children, some seating and hosts annual events for the community such as Matariki and Christmas Carols.

St Albans Catholic School has a flourishing school garden which has also won an award at the Sustainable Edible Garden Awards and at the Ellerslie International Flower Show. Their produce is shared within the school community and eaten at school (Sjoberg, 2014), with some also going to less fortunate families in the area (Emma Twaddle, pers comm.).

Although it has been unavailable for approximately 18 months, the Edgware Village Green, located adjacent to the old pool, was once another community garden, which like the Packe Street Garden grew both edibles and ornamentals. The future of this area is still being contended with the CCC, and is to be discussed in an upcoming AGM in July.

6.2 Skills in the Community

At present the St. Albans community has a wealth of experience to draw from. A number of people in the community have skills vital to the establishment and upkeep of community gardens. Many of the people have their own gardens where they have honed their skills, while others have a more professional skill-set to draw upon.

Peggy Kelly and Bill Sykes are one such example of an asset to the St Albans area. Having lived there for decades they see the growth and advancement of the suburb as extremely important. They are both active in the community garden while personally having a well tended garden at home. Bill is a retired botanist whose advanced knowledge of plants and soil is extremely useful to the planning and upkeep of these gardens, while Peggy is the former Christchurch gardener of the year with huge experience and knowledge. Together they compliment each other and pass their knowledge on to the younger, less experienced volunteers at the Packe Street Community Garden.

7. Results

The results of the online survey were very mixed, as can be seen by the Figure 2 below. There was no clear trend of agreement for all of the assets apart from places to share food. In response to this question, over 80% of the respondents disagreed that there were adequate facilities to share food in St Albans. When we asked for suggestions of places that the community would like to see used for more sharing and growth, the most common response was for parks, namely Abberley Park. Other suggestions included schools and having a market at the community centre.

"Abberley Park was farmed during WW2 and could be used again."

"All parks should have fruit trees and shared raised beds"

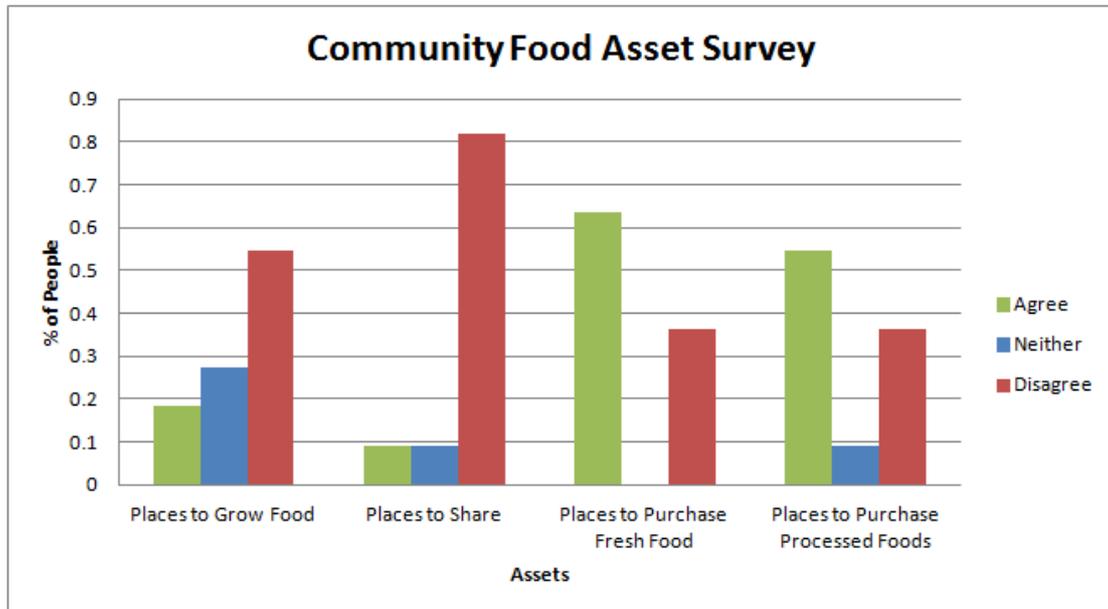


Figure 3: Graph of Food Assets

We also asked the community about whether they had gardens in their place of residents, and this was partly to establish the available amount of land for use in private ownership. 10 out of the 11 participants said that they did have a garden. Of these 55% said that could not or did not want to garden in their spare time.

In the interviews, our questions were targeted more to what makes food resilient communities and where we could improve. We did not ask about gardening and sharing habits because we knew that these people either had a lot of knowledge or participated in gardening or food resilience programmes already. From the interviews, the main response was again that the provision of space for growing and sharing food was an important asset for food resilience. The respondents were positive towards many of our ideas and the ones that were given to us by the community, especially growing fruit and nut trees and raised bed gardens in parks.

One concern, however, surrounded the ability to reach agreement with the council, following historic disagreements and failed partnerships. We met councillor Ali Jones who showed a real interest in food resilience initiatives, though pointed out issues concerning potential contamination of land and private ownership of the sections. Both of these concerns require further investigation. Additionally, having supportive policy towards community assets and for land use was also noted as being important.

"..poor policy that is out of touch with people's essential needs"

8. Community

Community is quite well used term, but defining communities is difficult, and we believe it is important to define this when using it here. In the past communities were primarily place based because people could not travel nor communicate over far distances (McShane, 2009). With the development of transport and communication, as well as the growth of cities, the gaps between places have been bridged and therefore changed the prevailing structure and meaning of community (McShane, 2009). It has been argued that community is no longer able to be brought into being by geographical or physical boundaries only (McShane, 2009).

So then how do we define community groups? We believe it is better to define communities as a group of people who may individually have some diverse goals, but also collectively share common visions, interests, and skills. While locality is still important, outside intervention can still be used so these goals can be developed in a cooperative way to achieve shared outcomes.

9. Areas for Improvement

Of the possibilities listed below, there is no one idea which will be effective alone. Rather, many of these ideas will only reach their full potential when they are used in conjunction with each other.

- **Parks and Vacant Lots** – Since the earthquakes in 2010 and 2011 there are many vacant sections of land where homes have been demolished, and where others are scheduled for demolition. These sections will be reused, but this is unlikely to happen for several years. So, like the Hayes Valley Farm in San Francisco, interim-use agreements need to be looked at so that in the period between pulling down these homes and rebuilding, this land can be productively utilized. This idea was suggested to Councillor Ali Jones as well as Helen Ross who both saw the benefits but mentioned the issues of private ownership of many of these sections, as well as potential contamination of some of the land. Additionally it needs to be investigated whether using portions of existing parks for edible gardens and fruit trees is feasible.
- **Green Roofs** – Green roofs are an effective way to utilize limited space in an urban environment. To maintain the integrity of a building it is important that green roofs are planned in advance where the added weight of the garden to the structure is taken into account, and not merely added to an existing building. Because some buildings in the suburb need to be rebuilt due to earthquake damage, this is a perfect time

to promote green roofs. Due to the A-Frame nature of many of the homes, green roofs would probably be most effective on commercial structures. Not only do green roofs add beauty and provide food, but they help to manage stormwater runoff. Grass roofs 4-20cm deep have been calculated to retain 10-15cm of water as well as to slow the flow of excess water it is unable to hold. This relieves stress on storm-water systems, something Christchurch desperately needs considering the significant post-earthquake flooding (Green Roofs for Healthy Cities, n.d).

- **Curb-side Gardening** – This is another option which will require CCC consent which involves the use of green spaces bordering the road to grow produce. Aside from getting consent, one concern is the effects vehicle pollution may have on what is grown. It needs to be established that there would be no adverse effects on consumers of the produce. Examples of this occurring are appearing around the world, such as in Oregon where many residents are opting to grow vegetables in this manner (LeBaron, 2012).
- **Food Sharing Mechanisms**
 - Phone Application: Once food is being grown locally it is important that it can be shared throughout the community. One option to do this is to harness technology. A phone application (or *app*) is one option. Possible ideas involve an app whereby users could state both what they have an excess of and are willing to share, and what they are lacking and would like shared with them and a simple chat function to facilitate the transfer of goods.
 - Table and Market: As an alternative to the above, a sharing table where growers can place their excess produce and exchange with others. This would also be easier for people less confident with technology. In years past a similar initiative existed. Every Sunday in the ASB Park carpark a market was held where people could share produce and other foods. Unfortunately this no longer exists as the carpark is needed. For this to be a possibility again a new location needs to be arranged.
- **Increasing Capacity of Current Initiatives** – This would involve setting aside more space at places already involved in local food production initiatives. Unfortunately, places such as the Packe Street Community Garden have already used much of their space, while the St Albans Catholic School is relatively small and what space it has needs to be used for a variety of different things, and not just a garden.

10.Limitations

Despite the overwhelmingly positive reactions to the work being done, there were a number of limitations. Time and capacity was a limiting factor in the project. Other academic commitments, personal life and sickness restricted the amount of time available for us to conduct our research, especially our interviews. In addition there were a number of people we had hoped to speak with in the community who did not reply to our communications.

The survey website we used unfortunately limited us in the amount of questions we could ask to nine. The nature of the St Albans News Facebook page meant that it was not featured on the page for long, as they are constantly updating about any relevant and interesting community news and projects. This is a possible reason for the low response rate of only 11 although we had it published on the page twice. This amount is not fully representative of the St Albans population, and therefore further surveying such as street surveys or door to door surveys could have been used in addition to get a more representative sample.

Additionally, the few responses we did receive did not develop into any clear trends. People seemed split in their attitudes to local food production and in their willingness to get involved in community projects. However, these responses were limited by those able to access the internet. Broadly speaking it is the younger generations who use these technologies, while in our experience of helping out in the community garden there was a high proportion of people aged 60 and above. It is likely that if representative numbers from each age demographic took the survey we would see clearer trends.

11. Conclusion

Achieving food resilience in any community will always prove challenging. St Albans is no exception. Due to their dedicated residential association as well as volunteers with the appropriate skills, St Albans is a community with a good foundation on which to start. Temporary utilization of vacant spots, a move towards green roofs on new buildings, and effective produce sharing techniques are all important improvements that need to be added to the already existing community gardens. An improvement of relations with local government is also important. The council has the power to grant funding and allocate space, and both SARA and the council need to recognize that more can be achieved if they work together to move forward.

12. References

- Buttery, C., Royal Parks, Leach, T., Reynolds, B., Miller, C., London Parks and Green Spaces Forum, . . . London Food Link. (2008). *Edible Cities: A report of a visit to urban agriculture projects in the USA*
- Christchurch City Council. (2012). *Community Profile: St Albans*. Christchurch, New Zealand.
- ESRI (Cartographer). (2014). *Map of St Albans, Christchurch*.
- Feenstra, G. (2002). Creating space for sustainable food systems: Lessons from the field. *Agriculture and Human Values*, 19, 99-106.
- Franklin, A., Newton, J., & McEntee, J. C. (2011). Moving beyond the alternative: sustainable communities, rural resilience and the mainstreaming of local food. *Local Environment: The International Journal of Justice and Sustainability*, 16(8), 771-788
- Graham, H., & Zidenberg-Cherr, S. (2005). California teachers perceive school gardens as an effective nutritional tool to promote healthful eating habits. *Journal of the American Dietetic Association* 105(11), 1797-1800.
- Green Roofs for Healthy Cities. (n.d). *Green Roof Benefits* Retrieved 05 June, 2014, from <http://www.greenroofs.org/index.php/about/greenroofbenefits>
- Halweil, B. (2002). Home Grown: A case for local food in a global market. In T. Prugh (Ed.), *World Watch Paper* (Vol. 163).
- Hayes Valley Farm. (2013). *Hayes Valley Farm* Retrieved 01 June, 2014, from <http://hayesvalleyfarm.tumblr.com/Hay>
- Holland, L. (2004). Diversity and connections in community gardens: a contribution to local sustainability. *Local Environment : The International Journal of Justice and Sustainability*, 9(3), 285-305.
- Incredible Edible Todmorden. (2014). *What We Do* Retrieved 25 May, 2014, from <http://www.incredible-edible-todmorden.co.uk/projects>
- Koch, S., Waliczek, T., & Zajicek, J. (2006). The Effect of a Summer Garden Program on the Nutritional Knowledge, Attitudes and Behaviours of Children,. *HortTechnology*, 16(4), 620-625.
- LeBaron, M. (2012). *Curbside Vegetable Gardens Adding Whimsy to Your Home* Retrieved 24 May, 2014, from <http://www.babble.com/crafts-activities/curbside-vegetable-gardens/>
- McShane, O. (2009). *Losing Touch with the Changing Definition of Community* Retrieved 10 May, 2014, from <http://www.newgeography.com/content/001045-losing-touch-with-changing-definition-community>
- New Zealand Doctor. (2011). *Hunger Makes a Return* Retrieved 10 June, 2014, from <http://www.nzdoctor.co.nz/in-print/2011/june-2011/1-june-2011/hunger-makes-a-return-to-nz.aspx>
- Robinson, C., & Zajicek, J. (2005). Growing Minds: The Effects of a One-year School Garden Program on Six Constructs of Life Skills of Elementary School Children. *HortTechnology*, 15(3).
- Sjoberg, A. (2014). *Principal's Blog* Retrieved 29 May, 2014, from <http://www.stalbanscatholic.school.nz/WebSpace/235/>

The Localising Food Project (Producer). (2014a). The Dancing Gardener – Roadside Gardening. [Video] Retrieved from <http://www.localisingfood.com>

The Localising Food Project (Producer). (2014b). Fruit Trees and Refugees: Stoke Open Orchard. Retrieved from <http://www.localisingfood.co.nz>

Twaddle, E. (2014). St Albans Fruit and Veggie Co-Op, *St Albans News*, p. 6.

Warhurst, P. (Producer). (2012). Pam Warhurst: How we can eat our landscapes? [Video] Retrieved from https://www.ted.com/talks/pam_warhurst_how_we_can_eat_our_landscapes/transcript

13. Appendices

13.2 Interview Questions

- What does food resilience mean to you?
- What are some of the assets that make a food resilient community?
- What are some of the barriers to food production and sharing?
- Where do you think St Albans could implement food resilience projects?

13.3 Survey Questions

- What is your gender?
- Which age group do you fit into (>18, 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75+)
- Do you have a garden at your place of residence?
- If so what sorts of plants do you grow? (flowers, fruit, vegetables, natives, medicinal, herbs)
- Do you or your neighbours and friends share excess produce?
- Describe your attitudes towards gardening (no interest, interested but do not/ cannot garden, interested and garden, a lot of knowledge and garden)
- Have you heard about the Packe Street Community Garden?
- Does St Albans have a suitable amount of (places to grow food, places to share food, places to purchase fresh food, places to purchase food made from local produce)
- Where would you like to see more growth and sharing of food in St Albans?