“SEWING THE SEED”
An urban farming education centre in Orakei
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Explanatory Document

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ABSTRACT

New Zealand’s population has been and is continuing to grow at an ever-increasing rate. As a nation, we are moving into a future of urban city living and have in the process developed a disconnect between the traditional aspects of natural food production and our communities. The alarming factor here is that many people today are somewhat or completely unaware of where their food is coming from and see urban city living and food production as two separate entities.

For baby boomers, it is common to have grown up within a rural setting, on farms or in small communities. These environments provided a natural understanding of food production from the core, as well as understanding of crops and the ‘circle of life’. We as the current generation moving into the future, no longer have such a direct association with food production. As a result, we have become out of touch with the basics; where our food comes from and how it ends up on the supermarket shelves and our own plates. This shift and lack of education cannot be blamed on the current generation but the decisions from this point will either shorten the gap or create a larger divide.

This project ‘Sewing the Seed’ will explore the concept of urban farming through multiple architectural typologies, with the intention of creating an educational environment. This project is not an ‘Urban farm’ or solely a ‘school’ either, but instead a building complex proposing itself as a centre of education for urban farming, that aims to educate citizens on topics of ecology, planting, growing, harvesting, cooking and consuming (seed to plate) through participation and observation. The intention of this approach is to reintroduce the concept of combining cities and farming on a necessary and realistic level, to ultimately prove the concept can have a positive impact within our urban environments.
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Natural food production is an integral part of how we resource our lives, and has played a significant role in the way society has transformed. If we look back far enough it becomes clear that urbanisation and agriculture were once two intertwining concepts that worked together seamlessly in people’s daily lives.

Until the end of the 19th century New Zealand was predominantly a rural country, with roughly 60% of New Zealand’s population living in rural areas. Until the early 20th century, “Rural and Urban New Zealand coexisted” and growing up on a farm or having family members with farms was a standard concept. Many New Zealanders grew up in environments where crops and food production were a natural part of everyday life. Through the rise of industrialisation and growing transportation systems, this relationship disappeared. As a society, we have moved into the future of urban city living and we no longer have such a direct association with crops and natural food production. Future generations have increasing aspirations to live in cities and away from rural lifestyles as it is all they have ever known.

To introduce a personal perspective: At 23, I have lived an urban lifestyle in the same home my entire life, not questioning the reality of where the food in my fridge comes from. Only last year I was introduced to the processes and concept of living off your land. This project has been born out of this realisation that I myself am part of this growing disconnect between urban lifestyles, the processes of natural food production and how we resource our lives.

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2 “Historical Context.” Stats NZ.
PROJECT OUTLINE

The notion of urban farming has been promoted as a step in the right direction to help maintain sustainable lifestyles. Articles and educated opinions suggest that although vertical farming skyscrapers and huge societal changes/masterplans are positive attempts, they are not financially sustainable or realistic right now.

With this as a foundation, this project is not an "Urban farm" as such, but a building complex that aims to educate citizens on topics of ecology, planting, growing, harvesting, cooking and consuming (seed to plate). To do this, the project is not solely a "school" either but presents itself as a centre of education for urban farming, educating through participation and observation.

Educating through participation:

School: The schooling component of the project is proposed as an elective that classes would take for a term or semester. Any school in the wider Auckland region could utilise this option. It will provide students with opportunities to learn and participate in processes of urban farming to merge the gap between their everyday lives and food production. This component aims to reach as well as aid the younger generation that is most susceptible to change.

To broaden education through participation and narrow the divide as a society, we also need to address the demographic of the baby boomers. Therefore, night classes and cooking classes for adults would be offered, where all the produce is sourced from the market/farm within the complex.

Co-housing: To provide the opportunity to educate through participation in jobs such as rostered vegetable garden maintenance, aiming to create a fully sustainable space in which residents are accountable for the upkeep of their living environment.

Farmers market: A practical solution to educating people about the origin of their food, applying the commercial and consumer routines we see in modern society of selling, purchasing, consuming and socialising.

Educating through observation:

While the urban farm aspect aims to educate primarily through participation, it will simultaneously educate through observation. Those passing by on the public transport links, cycle ways, the board walk and the amenities in the Orakei Bay Village, may observe the urban farming on the site, learning through passing by: This is an aspect of unintentional learning through observation. This is equally important as the participation factor, as researcher Suzanna Hogan suggests: “When people drive by, walk by, see every day a community garden, a home garden, an urban farm, a food project, a farmer’s market, it normalizes local food and it normalizes how food is grown”.

Where:

Many sites in the Auckland city area could be suitable for what this project aims to achieve, though the Orakei Bay Village Site seemed most fitting. It sits on the fringe of Auckland CBD and suburban areas such as, Orakei, Remuera, Meadowbank and St Heliers. The Orakei Bay Village that currently occupies the other half of the site is an upcoming hub, which aims to act as the ‘Ponsonby Central’ for this area and its surrounding suburbs. The development on this site has begun but is not yet complete. This allows the project to progress the development even further, creating the missing piece. The site is easily accessible through multiple modes of transport and has the potential to become an example for future developments.

Figure 1.2: Garden sign from Hamilton Public School Australia.
RESEARCH QUESTION

How can we use selected architectural typologies to reconnect people with the educational value of natural food production?
AIMS AND OBJECTIVES

The primary aim for this project is to reconnect urban dwellers with the natural processes of food production.

Objectives:

1. To educate and inform the urban population with sustainable food production to a level that encourages participation and a desire to adjust their own lifestyles and living environments accordingly.

2. To use architecture to create an atmosphere that attracts people who may not initially be intrigued by the natural food production aspect, but are attracted by the social characteristics of the space.

3. To create an indoor–outdoor social environment that incorporates growing plants for food production in a sustainable manner.
There are many debates around what urban farming can do for cities and communities. Urbanism and agriculture have a relationship that dates back centuries, however the modern culture has taken a step away from that relationship and we are only now attempting to bring the two back together. Being somewhat new territory the knowledge that exists on the topic is vastly varied, with not many strong conclusions or results, but introducing many discussions. This creates a divide between ideas and leaves people on opposite ends of the spectrum.

Architect Carolyn Steel touches on the concept of a divide between natural food production and urban lifestyles, she addresses that “one of the strangest things about feeding the modern urban world is the sheer invisibility of the process.” Steel makes it a clear fact, that food in cities arguably has the greatest social and physical impacts on our planet and communities, yet most of us in the western world are not conscious of the processes.

One of the debates is whether food production is viable in our cities. There are two very clear opinions on this question. One being those who believe that taking a punt at urban farming and intertwining it into our city fabric is a step in the right direction, despite taking some bad turns. They believe in experimentation as David Lepeska says in ‘betting the farm’ that “some experiments will fail, and that’s precisely the point.”

On the other hand, there are those who see failed attempts of urban farming as the whole picture and believe it should stay out of the cities. The idea of “highest and best land use argument” is a large debate under this topic. In Brad Plumer’s article, “The real value of urban farming” he says that “Cities only have finite space, and sometimes the greenest thing you can do with a vacant lot is build more housing, rather than grow a bunch of crops.” Also, Pothukuchi and Kaufman claim in their publication “Placing the Food System on the Urban Agenda” that the demands for these food systems in the urban construct is much lower than those for transportation, housing, employment and the environment.

The full potential of food in the urban system is far from being realised because of the top-down false sense of security about its ongoing availability and overshadowing of more immediate demands. A lot of this comes down...
to hype. Many of the those that believe that “agriculture is a rural activity that does not belong in the city” conclude that the arguments for urban farming are so persuasive that they have become irresistible, and we have been ignoring the realities. With urban farming being viewed as a recent development and not a path that everybody is 100% on board with, we need to be careful not to overemphasize the outcomes of its attempts, if you are to sell something that provides jobs and feeds entire cities and then it doesn’t, you will lose support fast.

With these conflicting views, the recurring conclusion is that educating the public is the solution to finding a realistic goal that can show communities how food production will benefit our society, and how we can use it to advantage our futures of sustainable city living.

As good examples that aim to combine urban farming with schooling ideas, we can mention two central precedents that begin to achieve what this project is setting out to do. These precedents are both designed by the French Architects, Chartier Dalix. The first being the Parisian Primary School in Paris, it combines a primary school for biodiversity and a public sports gymnasium. It sits in the heart of an upcoming urban development area, where its green roof sits out like a sore thumb amidst a concrete jungle. The second being Rosalind Franklin School, also in Paris, this complex combines a primary school, a sports hall and shops. It is at the intersection of two opposing urban environments, one an emerging neighbourhood and the other an open landscape. The brief was an attempt to create a symbiosis between two different worlds, the developed and the natural.

A few other specialist precedents will be studied to aid the design process of combining multiple typologies creating unique relationships within architectural design. For example, The Norton Museum in Florida by Marion Sims Wyeth and Foster and Partners, “a museum within a garden” and the Open Air School in Amsterdam, designed by Jan Duiket and Bernard Bijvoet which combined schooling with the outdoor environment.

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10 LILP, “Farming Inside Cities.”
12 Plummer, “The real value of urban farming.”
This project does not aim to find a solution to affordably feed more people, nor does it deal with the literal processes of urban farming and the technical sides of the processes. However, this project focuses on how architecture can create relationships between building typologies and social environments, to introduce the educational aspect of food production and reconnect the mass population with the origins of their food.

City dwellers may see the following issues with city farming. These have to do with time, space, and money. With supermarkets being so accessible and people living such busy lives, those who would benefit the most from having urban farms claim to not have the time to plant, maintain and harvest on their own. Secondly, it can be difficult to establish a profitable urban farm, and often the work does not provide many liveable-wage jobs. Finally, the market suggests the greenest thing we can do with vacant plots such as the Orakei one is to build more affordable housing, offices and transit hubs rather than to grow plants. One could choose to view these aspects as overall limitations for this project. However, the project aims to use education as a tool to help change these perceptions of natural food production.

The research recognizes the potential of combining multiple architectural typologies in order to understand the potential benefits of incorporating the processes of natural food production into our cities and urban lifestyles. The program that arises from the combination of these typologies, an education centre, a library, a retail hub, a gallery, a farmer’s market, cafes, transport systems and housing, around the core of natural food production, intends to further foster an understanding of urban farming.

Education as a tool stood out as the most realistic approach to incorporate natural food production into urban environments, to overcome the current divide between urban and rural lifestyles.

The architectural response to the research, following the existing site conditions, concluded that the individual programs of the typologies come together in one large hub that connects to the amenities of the existing Orakei Bay Village.
THE PROJECT - ‘sewing the seed’
New Zealand is a progressively growing country. Generation X and millennials are increasingly removed from merged environments and have developed a disconnect between traditional aspects of natural food production and their communities. As our cities are growing the gap is too, what people currently think is a modern concept, is in fact, a lesson that we can take from our past.

It is important to explain the previous growth of New Zealand's urban areas to understand the expected and rapid growth in the future. From 1881–2001 New Zealand’s urban population increased by over 1500% while its rural population increased by only 83%. The percentage of people working in agriculture also dropped by 10% alongside this move from being an “agrarian society to a highly urbanised one”.

Urban city living and rural agricultural lifestyles began a lot closer than many today seem to realise, despite modern culture’s attempt at separating them. Dating back roughly 10,000 years ago, in the historical region of Mesopotamia’s Fertile Crescent, urbanism and agriculture were discovered simultaneously in the same place and not by coincidence. They were realised together around the discovery of an important food source; ‘the grain’. This brought about change as it was the first constant source of food large enough to support permanent settlements and began to play a huge role in the progress of urbanism and civilization.

During these times, towns and cities revolved around food production, distribution and consumption. Urban landscapes were compact, small and surrounded by productive farmland, enabling a somewhat self-sufficient urban lifestyle. Carolyn Steel describes these as “centralised spiritual food distribution centres” as urban dwellers’ roles revolved around providing offerings to the gods, before consuming the food themselves. Thus, food played a critical role in the daily lives of urban dwellers.

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14 “Historical Context.” Stats NZ.
15 “Historical Context.” Stats NZ.
16 “Historical Context.” Stats NZ.
17 Carolyn Steel, “How food shapes our cities.”, Published 05 October 2009, YouTube. Video, https://www.youtube.com/watch?v=CLWRcLanti0.
18 Lepeska, “Betting the Farm.”
19 Steel, “How food shapes our cities.”
Food continued to dominate in larger European cities such as Rome and London. Carolyn Steel points out that food literally “shaped the cities”. Pre-industrial, 17th century maps of London, show that where food was being bought, sold and consumed, physically shaped the streets and cityscape. The names of streets, for example, Fish Street and Bread Street, give insight into how food was being active in cities like London. Public areas where towns came together to socialise and gather, like squares and streets, were at the time the only places that one could purchase or sell food. Because of this people had a sense of ownership and understanding about their food, what they were consuming and where it was coming from. ‘Locally made’ was a fact and not a luxury like it seems to be today.

21 Steel, ‘Hungry City’, Chapter 3, 18.
TRANSPORTATION INFLUENCE

With the passing of time, and the subsequent rise of the industrial age, food production became less of a priority for urban communities as production was outsourced to rural areas. This process was facilitated by the arrival of rail networks, especially in London with the beginning of the London to Greenwich railway in 1836. This allowed food to be prepped outside the urban precinct, and brought in by train, all ready for sale. Thus, the urban environment succumbed to consumerism, creating somewhat of an “out of sight, out of mind” mentality. It became apparent that urban landscapes were better suited for other industries, as the food production created unwanted odours and mess from the slaughtering of animals and other such processes.

Cities went from being self-sufficient food creating entities, to environments dependent upon rural production and delivery services. There suddenly became more opportunities for urban landscapes to grow into any shape or size. Geographical constraints became less of a concern for food distribution networks as a result of the rail system. This created a juncture between rural and urban living, with the former geared in such a way so as to facilitate the growing demands of the latter.

22 Lepeska, “Betting the Farm.”
24 Steel, “How food shapes our cities.”
New Zealand's growth, though delayed, emulated that of its European counterparts, and as its transportation system grew, so did its cities.

Throughout the 19th Century, the majority of New Zealanders lived in rural areas. However, because of significant rural-urban migration, which coincided with growing mechanisation within the agricultural industry, by 2001 New Zealand had become one of the world's most urbanised countries.\textsuperscript{26} This saw the exponential growth of urban populations, as cityscapes offered the prospect of better paid jobs and opportunities for younger workers. Although the agricultural industry was being pushed further away from the city, it was not deteriorating, as it continued to act as a major element in our growing economy due to its exports.\textsuperscript{27} Thus, although exports grew and remained our strongest market, the proportion of people working in the agricultural sector fell due to the demand of urbanisation.

\textsuperscript{26} “Historical Context,” Stats NZ.
\textsuperscript{27} Stats NZ, “Historical Context.”

Figure 2.4: Auckland’s transport growth from 1870–2010.
Early 19th Century
Maori first commercial growers of vegetables

Maori losing fertile land to European ownership

1880-1913 - Chinese took up market gardening - leasing land off the Maori.

1950-60's - Market gardening land was beginning to be lost to suburbs

1899 - Roads and railways lead to market gardens moving away from city centres.

WWII - 60-80% green vegetables were grown by market gardeners

1990's - Single or family owned enterprises being replaced by corporate businesses

Supplied fresh produce to developing settlements Auckland, Wellington, Nelson

Urban growth and the growth of supermarkets changed the growers world

Younger generations took better 'opportunities' e.g. work in the city

140 years Chinese market gardeners were the backbone of vegetable growth in NZ

Contributed to the economy and community

Today they want to make sure that the history, community and way of life that sprung up around market gardening is not lost

Figure 2.5: The Gick Family, innovative market gardeners in Mangere, South Auckland, 1960’s.

Figure 2.6: Chinese market gardeners in Westmere, Auckland.

Figure 2.7: Market Gardens, Franklin.

Figure 2.8: Chinese Market Gardeners, Pukekohe.
Chinese market Gardens played a huge role in New Zealand history and in the way our country developed. For 140 years, they were the backbone of our fresh fruit and vegetable industries that aided the growth of our economy.\(^2\) New Zealand’s urban centres heavily depended on them. Not only did they contribute to our economy but also to our community. A certain way of life sprung up around Market gardening, friendly trading and family businesses.\(^2\)

Maori were the first known commercial growers of fruit and vegetables in early 19th century New Zealand.\(^3\) They supplied fresh produce to developing settlements such as Auckland, Wellington and Nelson.\(^4\) During 1840, the Maori began to lose their land to European ownership. In the late 19th century a change occurred in New Zealand’s fruit and vegetable industry as Chinese settlers began ‘market gardening’. They popped up throughout the country leasing land mostly from the Maori and sold their produce initially to relatives who owned grocery stores.\(^5\) Auckland’s earliest Market gardens began to emerge in 1870. The main sites were, Carlaw Park, Khyber Pass, the Domain, the Bullock Track, Arch Hill, Great North Road and Western Springs.\(^6\)

Transportation, as it had done in Europe, played a part in sculpting New Zealand’s food industry. As roads and railways became more established and wider reaching, market gardens began to spread further across the country, away from the central city areas.

During World War Two 60–80% of vegetables were grown by Chinese Market Gardeners. By the 1950–60’s, land belonging to Market gardeners was slowly lost to suburbs. Urbanisation was growing and pushed the Chinese out of their central sites. Urban growth along with the development of supermarkets impacted the lives of these Chinese Market gardeners and their businesses.\(^7\) In the 1990’s single family owned enterprises were being replaced by corporate businesses.\(^8\) Younger generations whom once would have taken over the family business were taking supposedly better opportunities like going to university and working jobs in the city.\(^9\)

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\(^3\) “Social history of New Zealand Chinese market gardeners,” New Zealand Chinese Association Inc.


\(^5\) Wassilieff, ‘Market gardens and production nurseries – History of market gardening’


\(^7\) New Zealand Chinese Association Inc, “Books tell social history of New Zealand Chinese market gardeners.”

\(^8\) Chinese Digital Community, “Chinese market gardeners and the market gardens.”

\(^9\) New Zealand Chinese Association Inc, “Books tell social history of New Zealand Chinese market gardeners.”
HISTORY CONCLUSIONS

PAST

Through looking at cities from both New Zealand and abroad, it is clear that food played a major role in the formation of streets, their arrangement, their orientation and also their relationships to surrounding architecture. From the Hanging Gardens in Mesopotamia, where terraced gardens defined the buildings forms, to the London Smithfield markets where food and people crammed into streets and squares. The selling, purchasing and consumption of food dominated the social and private spaces. It was near impossible to not know where your food was coming from as it was a part of everyday lives. Whether it was a family farm, a neighbour’s farm, community markets or your daily milk delivery, ones’ relationship with food began at home.

Figure 2.9: Old Billingsgate Fish Market, London 1945.
Figure 2.10: Smithfield Markets 1830.
Figure 2.11: Hanging Gardens of Babylon.
Figure 2.12: Self-supply at Falkenberg Garden Cty 1920.
Figure 2.13: Hanging Gardens of Babylon.
Figure 2.14: Hadrian’s Villa.

Food Markets dominating public spaces

Natural part of sustaining your city life

Smithfield Almost impossible to not know where your food comes from

PAST

hanging gardens Harvest and grain dominating the architecture
Transport changed the way cities operated and directly influenced the way food was dealt with in urban environments. The demand for centrally located property in the urbanised area put increasing pressure on the property market to rapidly fill areas where markets and food were once essential, thus, we saw CBDs being built, and natural food production became isolated and less accessible to the everyday modern family.

However, we are now entering a time where we are trying to re-establish centralised food production within our urban framework, but with a modern twist. Cities like New York and Berlin are actively filling vacant plots and rooftops with sustainable initiatives and food production techniques to kick start urban farming. This goal of inhabiting gaps within our cities with food initiatives, is in many ways a return to the roots of food production in urban environments.

Figure 2.15: Garden, Beach 90th Street, Queens.
Figure 2.16: 63rd & 64th Street Community Garden, Brooklyn.
Figure 2.17: Seeds to Feed Rooftop Farm, Brooklyn.
Figure 2.18: Backyard garden, Brooklyn.
Figure 2.19: Prinzessengarten sketch.
Figure 2.20: East New York Farms, Brooklyn.
Figure 2.21: Prinzessengarten context.
Figure 2.22: Five Borough Farm, Urban Agriculture.
Future architectural proposals have considered ways of combining the new with the old, creating a confluence between agricultural activities and urban city housing. However, in these future proposals, individuals are expected to embrace lifestyle changes for the betterment of society. Before expecting every urban dweller to change their day to day lifestyles immediately, we first need to find a way to integrate what once worked, and what works now, through further educating the public on the benefits and values that urban farming can deliver for individuals and the larger community.

Figure 2.23: Grow Room, day time.
Figure 2.24: Grow Room, night time.
Figure 2.25: Regen Village courtyard.
Figure 2.26: Toronto’s Urban Farming Residence, Kitchen.
Figure 2.27: Toronto’s Urban Farming Residence Courtyard.
Figure 2.28: Regen Villages private garden.
Figure 2.29: Regen Villages vertical farming.
It is clear looking back through history that we as humans have not always been, but have become estranged from natural food production and rural lifestyles, which were once a normality. We as a modern-day society have lost touch with our roots, not because of our own actions but due to the rapid growth of urban culture within New Zealand.

Our food society is now being driven by food chains and large international corporations. Thus, leading us to “swallow the myth that small farms are inefficient and only factory farms can feed a hungry world”\textsuperscript{37}. But these corporations are simply doing what our world now revolves around, and that is making a profit.\textsuperscript{38} We have turned from a world in touch with nature and confident in how we approach it, to “city people who don’t want to endure the sight of food until it is ready for us in the supermarket”.\textsuperscript{39}

\textsuperscript{38} Tracey, Urban agriculture, 6.
\textsuperscript{39} Tracey, Urban agriculture, 5.
“Many students didn’t know that the orange part of the carrot was in the ground.”

I’d bring a class out to the garden, I’d point to the green carrot tops and say...

“Well what is this? Pull one out, let’s see what it is”

And they would pull it out and be like...

“That’s mad cute! So, the orange part is in the ground?”

“Yeah, that’s the root”

This is really a place for learning and the productive aspect of the garden is really a secondary goal.

“When I told my girl that the meat on her plate was from a lamb she burst into tears...”

Sarah Frank, West Side High School.
“urban farms won’t feed us, but they might just teach us...” 40

Sarah Frank, a teacher at West Side High School in America, describes in the publication ‘Five Borough Farm’, a scenario where her students are unaware that carrots grow from the ground.41 She would point at the green carrot tops sticking out of the ground and say:

Teacher:  
“Well, what is this? Pull one out, let’s see what it is.”

Students:  
“That’s mad cute! So, the orange part is in the ground?”

Teacher:  
“Yes, that’s the root!”

Through many of these learning scenarios that have taken place at this high school, they have come to the realisation that the garden and food production is in fact a place for learning and the productive aspect is really a secondary goal.42

In an article addressing the rural–urban divide in New Zealand, a parent speaks of another scenario where those living in rural areas say that children brought up in urban settings do not know where their food is coming from, which in many instances is true. The author recalls a time where his young daughter, at the age of 5 burst into tears when she found out that the meat on her plate came from a lamb.43 Further shocking results came out of the British Nutrition Foundation poll, highlighting the lack of food education for children between the age of 5 and 16.44

- 1 in 10 secondary pupils think tomatoes grow under the ground.45
- 1/3 of 5–8 year olds believe pasta and bread is made from meat.46
- 19% did not realise potatoes grew under the ground, 10% believed they grew on trees.47
- 1/3 of 5–7 year olds believe cheese comes from plants.48
- 20% believe that chips are animal products.49

These examples immediately explain the growing estrangement between individuals and their relationship with their food source and the need for the educational aspect of this project.

40 Nathanael Johnson, “Urban farms won’t feed us, but they just might teach us.”
41 Nevin Cohen, Kristin Reynolds and Rupal Shanghvi, Five Borough Farm: seeding the future of urban agriculture in New York City (New York: Design Trust for Public Space, 2012), 54.
42 Cohen, Five Borough Farm, 54.
In ‘A Pattern Language’, Christopher Alexander suggests that to learn and have full experiences and individual choices, one must be exposed to everything at hand. We are moving into the future where change needs to occur, and in an environment where some people are making the right choices and some are not.

This concept of using education to reconnect society with the processes of natural food production can be related to ‘A Pattern Language’. Christopher Alexander talks about a successful learning environment being a ‘market place’ of ideas where one can be spoilt in a variety of ideas to make their own opinion. We are not surrounded or engaged with urban farming aspects in our current city lifestyles, therefore are blind or uneducated on the benefits and outcomes it can provide. We do not have the sources or knowledge to make the choice for ourselves on what our opinion of urban farming is, or whether we believe we can take part in it. We need to incorporate these methods into our city fabric on a realistic level, amongst our day to day lives and into a ‘market place’ of ideas including urban farming.

Figure 2.32: A University as a marketplace of ideas.
In urban environments today, a ‘foodies culture’ dominates community hubs. While at times when shops seem empty and struggling, the cafés are full. Food has become a mainstream activity and not for the same reasons as it once was, but on a level of consumption which is key to our city’s social and economic viability. Food plays a huge role in our cities, but now in the form of restaurants, cafés and supermarkets. We no longer see food as a part of our cities systems but as a trend correlating with our obsession of consumption.

Food is a ‘universal language’ and something we all have in common. Although cultures have different cuisines, beliefs and traditions when it comes to food, for most cultures it creates intimate environments between family and friends, and connects people to public spaces.

Food is a social matter. We see this in the current foodie culture that has recently become on trend. Food fads are becoming more and more common and our local cafés and restaurants cater to these trends. Whether it’s different diets, styles or unique foods, these outlets are only exposing the glamorous side of food, the “pleasurable experience that often promotes a prosperous lifestyle” and the full food cycle is ignored.

The attempts we have taken as an urban community to create this ‘sustainable, green city’ vary in scale: from small individual interventions, to community farms that are tucked away and not visible to the public eye, and to skyscrapers and extreme interventions that are mostly proposals and are still yet to prove their practicality and viability.

Fong, “Form Follows Food”, 250.
Fong, “Form Follows Food”, 250.
Fong, “Form Follows Food”, 251.
Franck, 2002 pg 5.

50 Fong, “Form Follows Food”, 250.
51 Fong, “Form Follows Food”, 250.
52 Fong, “Form Follows Food”, 251.
54 Franck, 2002 pg 5.
Large Scale Attempts

One manifestation of the urban farming phenomenon we see in practice today, are the proposals of large, out-of-this-world utopias that demand full lifestyle changes at radical scales. This is all well and good in theory and in an ideal world would solve a lot of demand and supply efforts, however one needs to sell copious amounts of food to have the money to build one for most cities. This realistically won’t happen immediately due to lack of funding and modern day dwellers who do not believe in such drastic change.

It is not wrong for people to doubt and be reluctant to embrace such large empowering urban farm proposals. As technologies that are being suggested like vertical farm sky scrapers and urban agricultural city masterplans are still very new. Feasibility and success on these large-scale proposals are still in the process of being validated, especially when it comes to the expectation of supplying food to the growing population and their demand for organic foods or food in general. Not only do large scale urban farming utopias require a lot of funding, but they also require mass participation, looking at historical events this often only springs from the most extreme circumstances.

For example, during the Cuba Crisis in the 1990’s they faced a massive food shortage. Citizens of Havana planted any seeds or crops they could, on balconies, terraces, backyards and empty plots. In over two years, Havana had gardens and farms in every neighbourhood and by 1998 there were over 8,000 officially recognized gardens that were producing 50 percent of the countries vegetables.

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57 Johnson, “Urban farms won’t feed us, but they just might teach us.”
59 LeBlanc, “What You Should Know About Vertical Farming.”
60 LeBlanc, “What You Should Know About Vertical Farming.”
61 Lepeska, “Betting the Farm.”
Small scale urban farming interventions play a key role in intertwining nature and food production into the city fabric. We often see planter boxes and gardens in popular urban areas and shared spaces but these small interventions often lack a connection with the public and become small, condensed ‘features’ of the city.

Designers incorporate indoor planters and hanging gardens into interiors not only in cafes and restaurants but also in apartments and corporate buildings to meet the on-trend market and create a sense of environmental friendliness and a “green thumb” approach, but is a shallow effort to stimulate anyone’s thinking about nature, food and its processes. 64

These small-scale efforts although visually appealing and aesthetically pleasing, become another bit of ‘green’ in the city rather than an interactive approach that will not only interest but also educate the public about the origins of what is really on their plate.

These urban farming interventions that are not interactive play a major role in modern society buying into the myth that small farms are inefficient, and factory farms are worthwhile for our future of food. 65 Although a small attempt is a step in the right direction, there is often an inadequate reflection of how these interventions connect with surrounding amenities, landscapes and most importantly the public.

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64 Fong, “Form Follows Food”, 253.
“...but has anything really changed? ...the tendency to drip green ivy on buildings or plant grass or trees on roofs makes a parody of what needs to be done...this is not about the need for local produce, but about the destruction of the conceptual barrier between city and farm.”

By looking at today's urban food environments and how they currently exist in our cities, the limitations previously stated are sadly not that farfetched. The gap has still not been addressed, and the current attempts at making our cities greener and informing the public of the benefits of urban farming are not transparent or inviting to the public eye. Therefore, many people have already set their opinions about urban farming and that farms are fine where they are, far away and not amongst the cityscape, these people are happy not knowing more about their food other than its state on the supermarket shelves.

"Despite distributing a few planter boxes and ‘pocket’ size urban farming into undesirable leftover spaces,” 68 proposing large-scale metropolises or community gardens and private vegetable gardens that are hidden away in suburbs or in pots on apartment balconies, our connection with natural food production and urban farming is still divided.69 They are heading in the right direction, but either too far ahead from where our nation currently sits, or too small that the wider public is not fully engaged. We need to be realistic in how we can involve the public, in way that they see fit and that is successful.

The move forward needs to be a happy medium between what suits us now, and our future needs. We need to take a step further than the small planter boxes and potentially leave the skyscrapers for later, as intertwining the public actively is where the focus needs to be, “a sustainable agriculture is one capable of meeting the needs of the present while leaving equal or better opportunities for the future”.70 Social integration between the segregated groups is clear, using education to help people understand the models that are “good for the farmer, good for the community, good for the environment and good for the consumer.”71

"it is only through a built reality experienced by residents themselves that they will begin to recognize any effective outcomes, in the hope that it can change the way people think about the cities they live in”72

66 Mark Jarzombek, “Post-Sustainability,” In Smartcities + Eco-warriors, (Abingdon: Routledge, 2010), 247-249
68 Fong, “Form Follows Food”, 253.
69 Fong, “Form Follows Food”, 253.
71 Hogan, “Studying The Benefits and Limitations of Urban Agriculture.”
72 Fong, “Form Follows Food”, 252.
PRECEDENT STUDIES
Marion Sims Wyeth - Foster + Partners
Norton Museum
Florida, USA
Completion 2018
Art Museum, Housing (artist studios),
Guest houses, Research facilities, 
Education centre, Event space, 
Restaurant, Shop
Multiple Functions
Museum within a Garden

Glass circulation gallery connecting interior with lush greenery = Transparency

Visitors can view through the entire building via a new, transparent grand hall and refurbished glass and iron courtyard doors.

Central Garden
Core

Figure 3.1: Rosalind Franklin School.
Figure 3.2: The School of Biodiversity.
Figure 3.3: Prinzessinnengarten.
Figure 3.4: The Norton Museum.

Figure 3.5: The MMCA Museum.
Figure 3.6: The Commons.
Figure 3.7: The Open Air School.
Through research it became clear that a hybrid situation of architectural typologies, along with the need of education is the next step in order to be successful in intertwining urban farming back into our urban cities.

Therefore, the following precedent studies consider a variety of building types with a specific focus on incorporating more than the standard building means.
Figure 3.8: Rosalind Franklin School complex roof garden.

Figure 3.9: RF school terracing levels.
This Complex is in Ivry, France, an ‘urban development zone’ just outside of Paris. The site is at the intersection of two opposing urban environments, an emerging neighbourhood and an open landscape looking out to the open horizon. The school complex is the core of this transforming area, which is similar to what Orakei Bay Village aims to do for its surrounding suburbs and community.

The brief was an attempt to create a symbiosis between two different worlds, the developed and the natural. Chartier Dalix Architects designed three main ‘peninsulas’ forming two playgrounds in between these points.73 The playgrounds face south to ensure maximum sunlight into the most commonly used areas, classrooms and corridors. The levels of the school stagger backwards as they rise, providing a series of layered and planted terraces.

Rosalind Franklin School Complex incorporates planting into its most populated areas. This provides an intentional teaching opportunity about biodiversity and nature. The two main areas that encourage this learning is the teaching garden, a terrace accessible from the common areas on the first floor. A reading room on the mezzanine of the library which outlooks onto all the planted terraces below.74 These aspects are clear examples of what could be adapted into the proposed design, to assist in the reconnection of urban life and natural food production.

The Student apartments are designed to be compact and to function rationally. By isolating this part of the building to the far north corner creates a feeling of independence and detachment from the rest of the school complex, although still provides them with views of the planting areas of the complex.75 The location also ensures that it does not block the sun from entering the school playgrounds below.76

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74 ArchDaily, “Rosalind Franklin School.”
75 ArchDaily, “Rosalind Franklin School.”
76 ArchDaily, “Rosalind Franklin School.”
This Parisian Primary School is a Primary School for Biodiversity and a public sports gymnasium.

‘Landscape as a living space’
Located in the heart of an upcoming urban development, this primary school stands out of from its surroundings with its rich source of greenery. This sets the tone for the needed landscape within the wider context of the densely-built area. As well as being a place of learning, The Parisian School acts as a social hub for residents, and has a positive impact on those living and working within the area, as it brings a refreshing sight to such a built up and highly dense environment.

Chartier Dalix’s main aim is to bring biodiversity back into the core of urban areas, while connecting education and nature. The goal is “to simulate a self-contained ecosystem, a landscape and a rich field of explorations and discoveries for children.” By combining the formality of a school and a public gymnasium, the wider community is invited into this complex, successfully incorporating biodiversity and a natural environment.

Terraced courtyards enable a gradual change between what is happening on each level. The classrooms on the upper levels to softly wrap around the playgrounds and vegetated areas - Increasing contact and views of landscape.


79 ArchDaily, “Primary School For Sciences and Biodiversity”.

Figure 3.14: Terraced program levels.
Figure 3.15: PP School Roof garden.
Figure 3.16: PP school context.
Figure 3.17: Children occupying roof garden.
Figure 3.18: View from surrounding buildings.
Figure 3.19: Analysis of levels and views from surrounding buildings.

Figure 3.20: PP School playgrounds.
‘Planting seeds for a better quality of life’ Urban farm, restaurant/café, public hangout.
Prinzessinnengarten is a mobile urban farm that pops up on empty plots around the city, and is ready to move once a developer buys the site. The aim is to create a garden community that educates and entertains on vacant sites.

Prinzessinnengarten creates an alternative form of life where there is a constant interaction between garden and city, and that encourages improvisation and experiment. Combining multiple aspects to the main urban farm program has brought people of all ages, races and backgrounds together throughout the community. Combining multiple aspects to the main urban farm program has brought people of all ages, races and backgrounds together throughout the community.

Visitors can volunteer to work in the gardens, buy produce, eat at the café (which uses produce directly from the gardens), or one can simply sit amongst the growing plants and read a book or have a conversation.

The main attempt is to intertwine urban farming into the daily activities and surroundings of city dwellers in a fun and easy going way. Prinzessinnengarten’s overriding goal is to be a pioneer in showing everyone what can be possible and how this can become a constant and positive aspect of our cities.


Shaw, interview.
Figure 3.25: Participation in garden maintenance.
The Norton Museum has multiple functions, it is simply not an Art Museum, but a mixed use hub with Artist studios, Guest houses, research facilities, an education centre, event space, a restaurant and retail shops.

The main concept pushed throughout this design is a ‘museum within a garden’. This steps away from plotting gardens around the site to creating the feeling that gardens are a part of the internal spaces. It aims to do this sympathetically and to become a focus for the community. Boundaries are pushed further with the public; the restaurant and pavilion are used outside the hours of the museum which activates the building at night as well as day.

Transparency is key throughout this design, as it is used to directly involve the public into the programme of the building. Architectural glass circulation galleries have been used throughout the building. This allows visitors to see through the entire building, via a transparent grand hall, into the outdoor courtyards and lush greenery, this creates a visual connection between the interior and exterior.83

This museum uses a series of open courtyards to mediate between the historic and the modern spaces. It experiments with levels between courtyards above and below the ground level, which creates interesting connections and relationships between circulation and how you approach and enter each courtyard or interior space.

The courtyard orientation breaks up the building into segments. Each segment has a specific function which controls the level of connection each courtyard has with the interior spaces, whether that be physical or visual.
The Commons
Brunswick, Melbourne
Breathe Architecture
2014

The Commons development has a Co-housing ethos, its key goal is to find a symbiosis between the natural and the developed worlds in a modern way. Taking the standard apartment block where each apartment is the tenants privately owned space, and adding another aspect to the architecture and programme of the building where interaction is encouraged. 15 percent of the apartments amenities are devoted to communal activities and includes large spaces for people to come together as well as smaller spots for individual activity. The rooftop garden includes a roster for garden jobs and upkeep, these include individual and collective aspects, as well as communal clothesline on the roof of the apartment building.

Whilst this is a positive and successful development and move into a form of urban farming. It may create social environments between the residents of the complex, however the tenants buy into this co-housing ethos at their choice and the wider public are excluded from this more private form of urban farming.
The Open-Air School was created with the goal of providing a better environment for the healthy child. By quite literally creating physical connections between the classrooms and the outside world. The tool was having wall-less classrooms, open to the fresh air and the natural environment.

The interesting part of this precedent in relation to this project is its attempt at changing the normalities of the school typology, and adding a new characteristic to it in order to solve a much larger issue. The actual Architecture was used to promote the architect’s ideas and beliefs on how aspects of the world should be. Their social concerns overshadowed their aesthetic concerns.
The Evaluation of the precedent studies, despite being different architectural typologies, revealed several important factors. These correlate between making each precedent successful, and what is absent in today’s relationship between urban life and rural food production. These qualities highlighted throughout the evaluations translate from theoretical aspects that are missing and into design tools that could potentially solve the current divide.

Figure 3.45: Analysis diagrams from precedent studies.
RESULTS FROM PRECEDENT STUDY

Outdoor Spaces
Combined Typologies
Central Cores
Boundaries
Transparency
Public Dynamics
Levels

Outdoor spaces: These create areas to effectively connect the public aspect into the building, or where different typologies within the complexes can meet and create seamless relationships. Outdoor spaces are treated throughout the precedents as equal value to the interior architectural spaces. This suggests we start to treat urban garden areas and the built environments as equals, rather than separate entities.

Combination of Typologies: Natural food production has been withdrawn from local communities and into the outskirts of towns and cities, they are not combined with other amenities or programs and sit alone, not welcoming the public at all. The combination of multiple typologies plays a key role throughout the precedents in creating positive and more dominant relationships with the public. It adds variation to the developments and helps in educating the public on certain topics. This factor could be used within the proposed development of this project to reconnect urban dwellers with the processes if natural food production.

Central Cores: With the current segregation between farming and city life, there is no obvious core or middle ground between the two areas. There is no middle ground or place where these lifestyles can convene or come together. Whereas each precedent is either the central core linking two districts/areas in a city, or there are clear central areas in the architecture itself, mainly large public areas or circulation routes.
**Boundaries:** The Boundary is quite dominant in today’s environment between where food production happens in rural non-central areas and the urban-city setting. Throughout the precedents the diversity in boundaries is key in making them successful, by having easy flow between indoor and outdoor settings, whether it be visual or physical connections. These created multiple interesting and inviting environments for the public as well as the occupants of the architecture. The boundaries that were less strict made the combining of different typologies rather smooth and diverse.

**Transparency:** There is near to no transparency in today’s environment between food production and cities. However, transparency in each precedent played a key role in connecting elements of the building to each other and to the public. Transparency being architectural and theoretical.

**Public Dynamic:** The lack of public engagement in natural food production today is key in the divide between urban and rural living and the lack of food education. Public interaction dominated each precedent and each one attempted to engage the public through their architecture whether that’s with public courtyards, public amenities, or engaging views for the public to witness.

**Levels:** The use of entries and courtyards on multiple levels in the precedents evidently creates interesting relationships between spaces and typologies. Used as an architectural control tool, where some areas only have visual connections and others physical, direct connections.
As research shows, the connection between urbanism and agriculture is not merely a modern concept, but is a relationship that dates back thousands of years and plays a huge role in history. Many debates about urban farming and its possible role in community’s, result in a range of different opinions. However, the recurring conclusion is the need to educate the public. The next step is to apply this conclusion of education being key, with the concepts developed through precedent analysis, into design development.
Figure 4.2: Brainstorm of concepts from the research.
The overall aims of this project can be summarised in 6 key words.

These words stand out as dominating aspects when combining different typologies, ideas and opinions. They become the make-up of what an urban farm needs to be an attractive and educational prospect to city dwellers who lead today's modern lifestyles. Architecture is the linking component; how can architecture be used to connect these 6 characteristics in an effective and realistic manner that will slot into the urban fabric that is our cities?

Often you find architectural examples with the combination of two of these terms, but rarely all of them together. Urban farming is often combined with either a café, a school or a shop and so on. It never often extends beyond these pairing relationships.

Christopher Alexander's opinions in ‘A Pattern Language’ correlate with this notion of combining typologies with education at the core. Alexander believes that learning should be a normal part of life, explaining that a key aspect to academic freedom, successful learning and growth of ideas is to exist in a setting where you are open to maximum opportunity and exposed to a variety of ideas for one to make up their own mind. He compares this ideal environment to a traditional marketplace, where there are multiple stalls attracting numerous people, whilst being able to freely explore before picking your niche. This is similarly what we are aiming to achieve by combining natural food production with multiple typologies, within an environment that can educate the public encouraging them to make their own choices on urban farming.

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ARCHITECTURE

grow  show  explain  educate  SELL  sustain

Figure 4.3: Projects aim in 6 Key words, linked through architecture.
In order to find out the architectural aspect of this project, it seemed useful to explore the relationships between these six key terms further. Finding the architectural typologies that relate to each of the six verbs through brainstorming was a first step in identifying the possible variety of functions that could be associated with them.

This begins to link in with Christopher Alexander’s idea of a ‘marketplace’ and having a variety of ideas circulating together to have a positive outcome on our learning environment.
The breaking down of each characteristic into literal architectural typologies that represented them highlighted overlaps where the architectural typologies did more than just one of the characteristics, for instance a museum can ‘show’ as well as ‘educate’.

This realisation turned this diagramming process into an attempt to combine different typologies and programmes to eliminate double ups and to find common denominators. All with the aim to create a new building complex where the 6 key characteristics can come together effectively and smoothly.

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**Figure 4.5: Architectural characteristics & typologies diagram.**

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**Figure 4.6: Architectural typologies & program diagram.**

The next step was to break down the typologies into their specific programmes. This emphasised more similarities, discovering which smaller internal programmes of the typologies overlapped. This process highlighted where they could connect and share spaces. Expected and unexpected overlaps will aid the designing process of this building complex.
This step of loose bubble diagramming helped to locate the typologies amongst each other and the approximate scale they may be in comparison to each other. It appeared to also hint at a hierarchy, highlighting the more dominating typologies.

Connecting larger typologies of the complex through smaller linking programs aims to avoid double ups of spaces and to find a balance between public and private areas.
The previous diagrams hint at potential plan layouts and programme relationships, the next logical step seemed to use these strategies to where they may sit amongst each other vertically in elevation, what may be located on the street front and what doesn’t need as much priority and therefore can be situated on higher levels.
These relationships become very important in this project. Public interaction is key around certain areas, such as the farmers market, aspects of the gardens, the board walk and the bridge. The more public interactive programmes such as the markets, are more suited on the lower levels of the development or levels that are easily accessible by the public through natural movement within the site.

The more private areas, certain parts of the school and the housing, sit on the higher levels of the development. This creates a level of separation, playing with ideas of terracing and levels from the precedent studies.

The bridge acts as a connecting component and a viewing platform, but also subtly aims to act as a dividing element between the more public and private sides.

**Public participation:**
These are aspects of the development/design that the public are encouraged to interact with.
- Market
- Boardwalk
- Gallery
- Cafes
- Library

**Public observation:**
These aspects of the development/design aim to educate the public and other users of the development through observing them.
- School Gardens
- Housing communal gardens

**Private aspects:**
These are aspects of the development/design that are not accessible to the public.
- Residential accommodation
- Co-housing garden
In determining a site for this project there were certain qualities established that the site needed to have, therefore this list of criteria was used:

- The site must be located in a developing or established central Auckland City Hub.
- The nature of the site must be inviting and easily accessible to the public and pedestrians, to encourage as many people as possible.
- There must be existing public amenities or activities surrounding the site that already draw a certain level of public interaction.

Site options:

- Ponsonby Soho Hole
- Kelmarna Gardens
- Great North Road Car Yards
- Orakei Bay Village
Figure 5.1: Auckland central map of the projects potential sites.
SOHO HOLE

This first site was the driver for the project. It is in a central Auckland area located on Williamson Avenue and Pollen Street in the booming hub of Ponsonby and on the fringe of the Auckland CBD and Suburban living. The site occupies the whole block, providing three full street fronts to be used. The traffic around the site is not too fast moving as the speed limit is 40mph and has many traffic lights, pedestrian crossing and parking.

There are many schools in the surrounding areas and many of food venues and amenities which could be used to create further connections, and allow for public to stumble upon the proposed development. The History of the site relates to food production as it was once a vinegar factory. Through many stages of failed developments, the hole in the ground became famous, and progress continued to be stalled as the community initially rejected any proposals of large scale buildings.

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Figure 5.2: Diagram showing which key characteristic the existing site and its context already achieves.

Figure 5.3: Soho Hole site, Ponsonby.
Site 2 is located in the booming hub of Ponsonby, on Kelmarna Avenue. It is located down a driveway with a simple sign on the gate. It is not very clear from the street what it is, and is positioned behind housing, eventually opening to large open land, that you wouldn’t necessarily know is there. It is withdrawn from the street and appears very private, acting as a destination and is hard for the public to stumble across.

Kelmarna Gardens is a city farm and organic community garden that has a main goal of building a healthy community and environment that promotes sustainable living.
GREAT NORTH RD, CAR YARDS

Site 3 is located amongst the car yards on Great North Road near the Ponsonby Road and Karangahape Road intersection. This site was considered as many of the car yards along the main road are vastly becoming out of place due to the increase of apartments developing along Great North Road. This plot is situated close to Ponsonby road which is thriving with amenities.

This site now appears as an odd industrial area, amongst a suburban/urban hub where shops and cafes are dominating. The increase of apartments being developed in this area could be a positive aspect, encouraging more public/pedestrians circulating the area of the site and drawing them in.

Figure 5.6: Diagram showing which key characteristic the existing site and its context already achieves.

Figure 5.7: Great North Road site.
Site 4 is located in the centre of the Auckland CBD, Remuera, Parnell, St Heliers, Orakei and Meadow Bank. It is a small peninsula surrounded by water. This site is situated on the fringe of the urban city environment and the suburbs. It is very central to multiple modes of transport, with the train tracks crossing directly through the middle of the site.

There are multiple amenities already existing on the site and is proposed to eventually be the central ‘hub’ for the surrounding areas, similar to how Ponsonby Central acts for Ponsonby and its surrounding suburbs.

Figure 5.8: Diagram showing which key characteristic the existing site and its context already achieves.

Figure 5.9: Orakei Bay site.
SITE EVALUATION

Concluded from analysing each of these proposed sites a few issues arose.

**Site 1 - Soho Hole**, has since been developed into a building complex with a large Countdown, Apartments, Multiple levels of car parking and more. What is now there blinds the idea of this proposal, and by ignoring its current development this would take away something that is currently serving its purpose to its surrounding community.

**Site 2 - Kelmarna Gardens**, the scale of what is there did not suit the scale that this project intends to propose. What is currently there now may only need a small intervention to make it more successful.

**Site 3 - Great North Road Car Yards**, being a main arterial route the speed becomes a problem. The traffic flow around the site creates a lack of a public realm and does not suit the proposed pedestrian dominated space. The site does not have the sense of wanting to naturally stop due to this pace of the road. A lot of the surrounding areas would need to be successfully replanned in order to suit the project.

**Site 4 - Orakei Bay Village**, offers multiple routes for exploration, especially with being able to make connections with what is existing on the other site of the train tracks. It is not yet an overly developed area, therefore has room for changes and welcomes future ideas. The transportation around the site, adds an interesting aspect to explore and allows accessibility not only to the community but to the wider public. The Topography of the site also adds a level of complexity with vast contours.
Figure 5.10: West view from Orakei Bay site towards Auckland CBD.
5.2

ORAKEI BAY VILLAGE - chosen site
Figure 5.11: Chosen Orakei site and its surrounding suburbs.
In 2011 Orakei Point peninsula was rezoned by the Auckland City Council to a mixture of site-specific, mixed use and open space zones. The development company Equinox Group has attempted to develop the site adjacent to the Orakei train station for almost 10 years. The process has been halted multiple times due to opposition from the locals, consenting issues from council and growing construction costs, and in late 2015 $100 million worth of off-the-plan sales were cancelled.

A vacant 50 year old warehouse that exists on the south side of the train tracks was instead converted to a developing retail hub named ‘Orakei Bay Village’. This seemed to fit in more with the character of the rest of Orakei, rather than large housing developments.

- Developers plans – large scale plans
- Community thoughts – small and modest ideals
- Orakei basin is becoming... hub, destination, people attracted to what is there now. Pleasurable. Welcoming.


The developed warehouse, ‘Orakei Bay Village’ currently houses a large range of amenities, with Farro Fresh and Kings Plant barn being the anchors.\(^9\) They range from restaurants, cafes, hairdressers, retail, brewery, florists, artists’ studio’s and much more.

The Orakei train stop sits along the train tracks positioned in the middle of the overall site and a 178-car carpark on the side to the north of the tracks, which is used mainly for commuters catching the train to work during the week, Monday–Friday.

The topography will play an important yet challenging role in the design process, giving the opportunity to experiment with different levels and tools to approach the varying heights. The highest point on the chosen site is roughly 12 metres above the ground level/train tracks and is almost a vertical drop down to the train carpark. This creates shade/shadow on the lower level of the current carpark at certain times of the day, as the 12-metre drop is on the southern side of the site. The site has a gradual change in level, leading down to the water on the north side. On the other side of the tracks the current Orakei Bay village warehouse also sits approximately 12 metres higher than the carpark, creating an empty valley with the potential to grow and bridge over the train tracks.

Figure 5.20: Existing site topography.
Orakei basin is situated in the centre of the Auckland CBD, on the fringe of the city, the bays and the suburbs such as, Remuera, Parnell, St Heliers, Orakei and Meadow Bank. The peninsula being surrounded mostly by water give multiple views from the site from many neighbouring spots, the site is clearly visible on the drive from the Auckland CBD to bays and vice versa.

Orakei Road is the a key road connecting multiple suburbs and acts as a main road to alternative routes. This can be accessed from the popular Tamaki Drive which links the CBD to the Bay area and also, Upland Road and Shore Road. This is essential as Orakei Road is the only direct access to The Orakei Bay village, therefore it is accessible for not only the direct Orakei Community but also, surrounding suburbs.

Access in and out of Orakei Bay village is limited by two driveways, one leading to minimal street level parking by the main entrance and the second heads down to a larger parking area that is below the main complex. Parking for Orakei Bay Village can be hard at busy times and when it does get busy, the flow of cars between the two driveways significantly slows down the traffic along Orakei Road.

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92 Admin, “Orakei Bay Village Retail Precinct.”

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Figure 5.21: Orakei Bay Village site plan.
Despite the sometimes-difficult parking, there are other modes of transport people can use to access the site. The Orakei train stop sits directly in the middle of the site, it is on the eastern train line, but is only one stop away from the Auckland CBD Britomart stop, therefore is easily accessible from any of the other lines such as the Southern line, western Line and the Onehunga line. The Cities Northern busway and the downtown ferry terminal are also only short walk away from the Britomart train stop. Many main bus routes stop a short walk away from the site.

There are multiple walks pinned near or around the Orakei Bay village, adding another aspect of circulation or transport to the site. There is the Orakei basin Walk which is roughly 2.88km long, taking you around the basin along the boardwalk and bridge across the Purewa arm of the basin built in 2010–2011. This walk starts off Upland road by the roundabout and ends by the Kings Plant Barn and Café on the peninsula. There are several routes that link up with this boardwalk or take different paths which all eventually lead to The Orakei Bay Village. A popular cycle route called the Hobson Bay–Orakei Basin Circuit passes through multiple popular Auckland spots including Orakei Basin.

6.0 FUNCTIONAL REQUIREMENTS

Site specific program decisions

After analysing and deciding on the site, the overall program of the proposed development was altered according to what the current amenities are at the existing Orakei Bay village. The site helped to define the programme of the proposed development along with the previous diagrammatic processes.

Current amenities at Orakei Bay Village:

- Supermarket – Farro Fresh
- Kings Plant Barn
- Cafes
- Retail
- Artists’ Studios

Functional programme requirements of the proposed development:
(assumption that green spaces are a given)

1. School Component / Library
2. Housing
3. Bridge/Boardwalk
4. Markets
5. Gallery/Exhibition space

Rather than proposing the standard concept of a school that serves a particular ‘zone’, including the immediate surrounding suburbs that limits the number and range of students using the education centre through a year. This project aims to reach the largest number of participants from the city. Therefore the schools program/brief is of a camp or elective that schools from around Auckland can travel to for a certain part of their curriculum. Therefore a wider community is reached, drawing a larger range of people and a larger number of students through the education centre.
Participation:
Learning through participation is the core aspect of the school. It will provide students with opportunities to learn and participate in the processes of urban farming to merge the gap between their everyday lives and food production. This component aims to reach as well as aid the generation most susceptible to change. To initiate conversation and normality around urban farming, and ideally the concept will no longer be seen as foreign or new.

However, to broaden education through participation and narrow the divide as a society, we also need to focus on the baby boomer demographic. Concepts of participation that could be offered are night classes and cooking classes for adults, where all the produce is sourced from the farmer’s market and gardens within the complex.

Observation:
Learning through observation also plays a key role, with the school being at the core amongst the other architectural components. The surrounding amenities, existing and proposed, can observe the gardening activities taking place within the school environment.

Participation:
The co-housing aspect of the urban farm will provide the opportunity to educate through participation in rostered vegetable gardens and general maintenance of the sight, aiming to create a fully sustainable area in which the residence are accountable for the upkeep of their living environment, providing education in a subtle yet practical manner.

Observation:
The residents of the co-housing scheme have the opportunity to learn through observation, by witnessing the farming/gardening activities of the school either from their dwelling or whilst arriving and leaving from their dwelling and observing the farmer’s markets on their weekends.
**BRIDGE & BOARDWALK**

**Observation:**
Those passing by on or using the bridge, boardwalk, public transport links, cycle ways and the amenities in the Orkaei Bay Village, may observe the urban farming on site, learning through observation. The bridge gets you from A to B within the site, however it also acts as a viewing platform. The Boardwalk aims to weave in and out of some activities taking place within the development, giving the public enjoying a walk or a cycle around the bays an insight into what is taking place. This aims to draw in the public that aren’t first attracted to the urban farming qualities of the development.

**Participation:**
Compared to the learning through observation aspect, learning through participation does not play a major role within the bridge/boardwalk program, other than the public physically using them as access routes or to observe the activities onsite.

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**FARMERS MARKET**

**Participation:**
The farmers market is a practical solution to educating people about where their food comes from and also creates the commercial and consumer routines we see in modern society of selling, purchasing, consuming and socialising.

**Observation:**
The farmer’s markets role in learning through observation is the surrounding public viewing the activity taking place within the farmer’s markets and amongst the fresh produce, either during morning markets on the weekend or night markets throughout the week.
CONNECTIONS - INITIAL SKETCHES

Initial Sketches – Between programme and the site.

An exploration of the connections between potential locations of typologies amongst the site helps further understand the physicality of the site through loose sketching and diagramming. This process also helps to explore initial design thoughts in relation to the site. By exploring certain views and sun angles are also important to decipher where certain components of the development might sit on the site, giving a feel for the potential movement around the chosen site. New connections were highlighted, between the existing components of the site and the new proposed components. Key relationships were highlighted between:

1. The Orakei bay village and the proposed development
2. The existing boardwalk and the proposed board walk addition
3. Apartments and their views
4. The train station to either side of the tracks, Orakei village and proposed development
5. View from the roads across the water to the proposed development

These relationships hint which of these connections need to be dominant, creating a hierarchy of which connections can be visual versus physical.

1. Physical and Visual
2. Physical
3. Visual
4. Physical
5. Visual

The strong transport axis becomes a dominant feature through this exploration. In the initial sketch, the proposed development somewhat envelopes around the train tracks, they become a very central point to the whole development as the connection made between the two sides of the Orakei village, old and new seems to extend over and around the train tracks.
Addressing the 3D aspect of the site became a dominant task. Massing allowed a further understanding of the site's scale and the following components, bridging, terracing, and verticality are used to address the site's changing levels. These 3 design components were influenced by precedent studies, focusing on creating an architectural response to the cliff-like wall on the southern side of the site, that is currently disconnected from the carpark below and the hub across the railway.

Figure 6.7: Three design components, bridging, terracing, and verticality.
3 DESIGN COMPONENTS

The bridging component creates a connection between the two sides of the site, from the existing Orakei Bay Village on the southern side of the railway tracks, across to the northern side of the railway tracks. The bridge acts as a subtle extension connecting the two ends of the site. It also acts as a visual connection for pedestrians from above, uninterrupted by the train, giving the public an insight of what is happening around the development. While it creates a direct link across, it avoids a physical connection with the happenings below. Due to its length, the bridges structure is at risk of becoming quite dominating, resulting in an eyesore to the rest of the development. The development of the form will be important to keep it at a scale that suits the surroundings.

Figure 6.8: Bridging component.
Terracing creates a gradual step by step approach in getting from the ground level to the top of the site. Drawing from the precedent studies, varying levels create different connections between certain areas of the proposed development. By starting at the ground level and creating prospects for physical connections, terracing is used to create a process of interaction, which allows the public to explore the whole development. This aspect although creating a journey of interaction throughout the one side of the tracks, it does prompt a slight disconnect from the existing Orakei Bay village warehouse on the other side of the train tracks. This option may allow for a more gradual access route, although it is not the most direct.

Figure 6.9: Terracing component.

This vertical component allows for a direct route from the ground to the top level. Although it is a faster route, it creates less opportunities for interaction within the development, as it does not draw you through the site, nor does it link with the existing Orakei Bay Village warehouse.

Figure 6.10: Vertical Component.
Through analysis it became clear that a combination of all three components, Bridging, Terracing and Verticality are needed to ensure the potential of the site is reached by creating interesting relationships between the different architectural typologies. This next step of exploration and massing in 3D became necessary to comprehend the size of the site in conjunction with the number of typologies being considered.

Exploring the idea of linking the design with the existing buildings in the Orakei Bay village and the surrounding residential areas, it becomes clear that an in-between scale of large, slightly broken up components would be most beneficial. A large mass development would not be beneficial or allow the development to reach its full potential, as it does not fit in with its existing environment, nor does it use the full scale of the site and its land, which is essential to ensure the urban farm is not only profitable but also a natural and green environment. By incorporating the existing Orakei Bay Village warehouse and retail component, it works as an extension and will immediately draw in interest from existing customers and active members of the community.

By breaking up the building and creating different components of the overall development, the site is not only being used to its full potential, but it also creates a hub which in the long-term will act as a community and education centre. The slightly fractured approach of programs/typologies, links back to Christopher Alexander’s proposition of a successful learning place to be like that of a traditional broken up market place. By breaking up the development into separate entities, it reveals that the architecture needs to speak clearly on where and what each typology is.
Figure 6.11: Exploration through sketching.
LOCATING THE PROGRAM

Figure 6.12: Exploration of access from Orakei Road side.

Figure 6.13: Exploration of entry points for the individual programs.
Figure 6.14: Exploring relationships between teaching gardens and surroundings.

Figure 6.15: Exploration of program locations.
LIBRARY

The library will be located above the ground level, with an overview of the planting areas. This acts as the ideal location, as taken from the precedent study of the Rosalind Franklin School by Chartier Dalix Architects where the viewing and reading decks were a successful part of the learning process as it enabled learning through observation. The library will not only be apart of the education centre but also be accessible to the community, and being based off of the ground level, the library remains as a destinational location with incorporated features to integrate the natural process into our day to day lives.

RESIDENTIAL

The location of this component has also been informed by Rosalind Franklin School by Chartier Dalix Architects. Their student apartments were intentionally developed to provide independence and detachment from the rest of the complex, while still having an overview of the school development and the planted terraces. This area has the highest demand for privacy, terracing it down the west bank can assist this as well as providing them with views of the water, city and bays and can provide the residence with their own private gardens that are separated from the rest of the developments gardens. The board walk around the peninsula needs to be pulled away from the housing and further out to the water in order to create more distance between the public and private spaces.

Figure 6.16: Locating the different program masses on site and developing their relationships.
FARMERS MARKET/PUBLIC SPACE

The farmers market and public space is located on the southern flat site below the cliff, adjacent to the train tracks. This location is ideal for a farmers market as the public can approach the area from 3 access points. Not only is the space accessible from the street and roadside for cars but also from the existing board walk circuit for walkers, and across from the train station for commuters.

Located on the Southern side of the cliff, there is potential for shadowing in this area. Looking at peak trading times, this has no negative impact on the night market. As it is south facing, the shadowing would not occur until midday, therefore the morning markets would not be affected by the potential for shadowing either.

A public set of stairs and access ramp is located to lead up the contours from the public space into the school area, acting as a leisurely access route as well as a platform for market spaces. This is used to encourage public up to the other areas of the site, and to have planters amongst these stairs, ramps and seating, to constantly introduce the public to aspects of planting and natural food production.
The location of the school is fundamental, it plays important roles in both the participation and observation aspects of design. To have the perfect balance between public and private is vital, there needs to be a clear definition of what the public can interact with and what they can merely observe whilst the school day is commencing. Locating the school on the level above the farmer’s market takes the school back from the direct street front and public access point, yet still keeps it in sight. The school situated on the upper level allows for a good degree of separation between the school and the public areas below. It is centred amongst the development, enforcing education as the core of this project, and allowing it to be viewed from majority of the other areas of the development, existing and proposed.

This Exhibition area acts as a barrier between the train tracks and the proposed public space. The buildings form curves around the site generating a courtyard space. This area will stand as part of the markets to not only create revenue but also raise awareness around urban farming in the artist community. By incorporating the existing art studio in the Orakei Village ‘artHAUS’ there is a direct link between the existing and proposed program. The low building form on the base level creates a linking component with the forms that encroach the steep contours.
Locating the Program

Entry Building / Modern Botanical Garden

This mass will act as a new age botanical garden using modern urban farming techniques such as vertical farming and aquaponics.

Whilst the other planting areas approach the traditional aspects of food production, it is known that these modern techniques are important and necessary in day to day farming. There is opportunity for the development to become another site for the 'New Zealand Plant & Food Research science company' whom provide research and development that adds value to fruit, vegetable, crop and food products.94

As the main foyer of the development, access to this area is via the lower level and also the bridging component from the existing Orakei Bay Village. By connecting the existing village with the proposed, we automatically draw in the current community members. The structure is built upon the sites steep contours, vertical gardens will grow throughout the development, creating a direct link that brings each program together and back to the basis of the gardens and the natural process.

The Botanical Gardens will be the main entry point for all divisions of the program including the housing tenants, and school students. Therefore the modern techniques used in the Botanical Gardens will be introduced to those passing through the building by both observation and participation.

Figure 6.17: Locating the green spaces amongst the architectural programs.
The next step is to explore the relationships between the architectural programs and the Green spaces amongst them. To ensure that there are both public and private aspects to the gardens and ensuring that the surrounding public can be introduced to these areas, through both accidental and intentional approaches.

**TEACHING GARDENS**

The School component has both private and public planting areas, ones that can be used whilst school is commencing, and for other activities after school hours.

**GREEN HOUSES**

The Green houses are situated on top of the school building, in a prime position that is viewable from both the street and the existing Orakei bay village, giving the surrounding public a natural insight into the processes that take place here.

**PRIVATE GARDENS**

The residential co-housing component has their own private gardens on the west side of the site, this allows them to take part in their private gardening away from the public realm.

**PUBLIC PLANTERS**

Green planters are scattered throughout the Public Space/entry point to the school, these act as a part of natural inclusion into day-to-day environments, there is not a huge aspect of participation to these green spaces, they are simply to introduce the greenery into the publics natural circulation areas and the Farmers Market areas.

Figure 6.18: Exploration of green space locations.
Transparency does not exist in today’s environment between food production and its urban cities. However, the precedent studies show how transparency played a key role in connecting the public with the programs of each building, architecturally and theoretically.

Different layers of transparency in the architecture will aid in the learning process of natural food production. The different layers of architectural materiality and form can control the occupant’s views, how, when and what they are viewing. Transparency becomes a key tool to decipher the architectural language and tectonics of this project through two key types of transparency, physical and conceptual.

The physical method uses layering of materials. This includes purely transparent glass allowing one to look out through and a method that diffuses what one can see through, an opaque glass or louvres and screens layered over glass.

The more conceptual method of transparency deals with the layering of space. This method echo’s the notion of transparency, the seeing or passing through of one’s gaze. Peter Zumthor does this with his Therme Vals Spa in Switzerland, creating direct transparency through breaks in the dense materials and forms into other spaces, externally or internally. This method controls one’s views and uses the layering of space and volumes to achieve transparency.
The Main circulation routes amongst the complex play the role of the museum typology. This being the approach of learning through observing and learning through passing by. Therefore it is important that the architecture dictates the views at certain points of the circulation to control what is being seen by the public, and allowing these paths to become places of interest and not simply direct routes from A–B.

Figure 6.19: Main exterior circulation around the proposed development.
CIRCULATION

The exploration of circulation throughout the main levels helps to decipher the more dominantly occupied areas. It also hints at which areas are more likely to facilitate dwelling compared to more transitional areas. Figure 6.20 suggests a lot of movement throughout the public dominant spaces on ground level. The first level houses a mix of public and private programs, figure 6.21 shows a more limited and controlled area for movement around this level. Lastly, figure 6.22 shows the second level being occupied by privately dominated spaces, while the free moving circulation decreases as the levels increase, the views develop and improve, aiding a visual connection more than physical connections through circulation.
Figure 6.22: Exploration of circulation and views from the second level.
PUBLIC SPACES

The below figure gives further insight into potential public spaces. These areas are all accessible to the public, and are designed to be used and shared between community members. All spaces have been intentionally set around the development to ensure that the public are surrounded by greenery and the growing natural processes, all depicted by the green in figure 6.23.
Figure 6.24: Snippets of potential public spaces and planting areas.
DEVELOPING THE PLAN

Figure 6.25: Exploration of circulation and views from the second level.

Figure 6.26: Exploration of circulation and views from the second level.
Figure 6.27: Exploration of circulation and views from the second level.

Figure 6.28: Exploration of circulation and views from the second level.
DEVELOPING THE PLAN

GROUND LEVEL

The ground entry into the development also houses the Botanical Gardens, marked in blue. This is the main access for the school (orange), housing tenants (red) and general visitors. Each typology has its own access, with the housing entry situated behind the central staircase to ensure privacy to those living there.
This open area doubles not only as carpark during the week, but also as the perfect location for a weekend market. The strategically placed concrete planters are able to move, enabling a clear path for visitors to navigate their way around the development. These concrete planters act as a support for the market structure, allowing stalls to open against them.

The stairs and ramp provide a direct access from the ground level into the main education area and common gardens. Throughout this public area there are breaks which create platforms that can be occupied by market stores or entertainment to activate the space.
SECOND MAIN LEVEL

The second level is mainly dedicated to the education centre, this is marked in orange, along with the library facility in pink. The cooking/demonstration class is located on this level, allowing direct access to the terraced gardens, enabling the class to extend outside of the interior classroom and be amongst the types of produce that they will be using.

This library, marked in pink, is situated on this level allowing ease of access to the school programs, as well as being located near the Orakei street front, allowing the wider public to use this facility.

The Bridging component on this level works as a subtle divide between the education centre and the more private aspects of the co-housing complex, marked in red.

The exterior spaces on this level are fairly loose, allowing them to be adapted to different uses, whether it be for the school during the weekdays, night classes or events at night time or markets during the weekend.
DEVELOPING THE PLAN

Figure 6.30: Exploration of the second floor level.
THIRD MAIN LEVEL

This level is the most withdrawn physically from the public areas. The biology lab based classrooms marked in orange, are located with direct access to the green house / green roof level marked in green. This allows ease for learning tasks and gives them a detached and more private garden to work in which physically detached from the public levels.

The rooms on this third level gain ideal views onto majority of the teaching gardens, enhancing the learning through observation method.
DEVELOPING THE PLAN

Figure 6.31: Exploration of the third main floor level.
Figure 6.32: North elevation, visual connections and circulation.
Figure 6.33: North – South section, visual connections and circulation.
CONCLUSION
CONCLUSION

Urban farming still remains in its infancy stage and has a long way to go in proving itself as a viable and natural part of our daily lives, simply because society is unaware of its benefits. Through an extensive education campaign and the subsequent growth in public awareness, it will undoubtedly grow and flourish within progressive urban environments throughout New Zealand.

The combination of multiple architectural typologies became the strength of this project, aiming to educate the public about natural food production and reconnect them with the origins of their food. It did this by creating a community complex where education was prompted in multiple ways, such as participation in food production activities at the school, shopping at the markets, volunteering in the gardens and observation through observing from the over bridge, reading at the library’s observation deck or passing by on the boardwalk. The proposed design became more than an urban farm. It became an education centre, a retail hub, a co-housing development and an overall community hub. This combination of typologies not only targets one audience, but reaches the wider community and incorporates natural food production into their daily lives.

The 6 key words, grow, show, explain, educate, sell and sustain, dictated the direction of the architectural typologies that were needed to make up the project and become a pragmatic tool for the future of urban farming.

Public awareness and interest may be garnered organically through the relationships and learning environments created through the combination of multiple typologies, both physically and visually. However, Through the development and combination of the 6 key words, the aspects of selling and sustaining became elements outside of architectures control. They become a vision that relies on a business structure and a larger input such as government funding to ensure their success.

This is not a solution as urban farming is not something that will happen overnight. But it is a useful framework for a potential solution to create a community hub that educates the public and incorporates aspects of natural and sustainable living into their everyday lives.

Our cities are growing more rapidly than ever and it is easy to fall into the understanding that there is limited space for mass farming or natural food production within these urban areas. By exploring urban farming around education and incorporating these architectural typologies into the “Sewing the Seed” development, it becomes clear that by bringing back the simple aspects of farming into an upcoming urban area, a community will not only benefit educationally, but they will also create a sustainable environment, something that is being over looked in our rapidly growing cities.
8.0

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‘SEWING THE SEED’
An urban farming education centre in Orakel

&

Noun [am-per-sand]
A symbol or character representing ‘and’

It is for connections, collaborations, inclusions,
bringing together and reminds us that there is always
more to come, & ...
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