

Resistance through Transformation
A Transitional Approach for Sustainable Peri-Urban Environments

**A thesis submitted in fulfilment of the requirements for the degree of
Master of Architecture**

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Declaration:

I certify that except where due knowledge has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and, ethic procedure and guidelines have been followed.

RMIT University Policy and Procedure for higher degrees by Research, (Sect. 11.6)

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Viet Tuan Pham
August 10th 2011

Acknowledgements

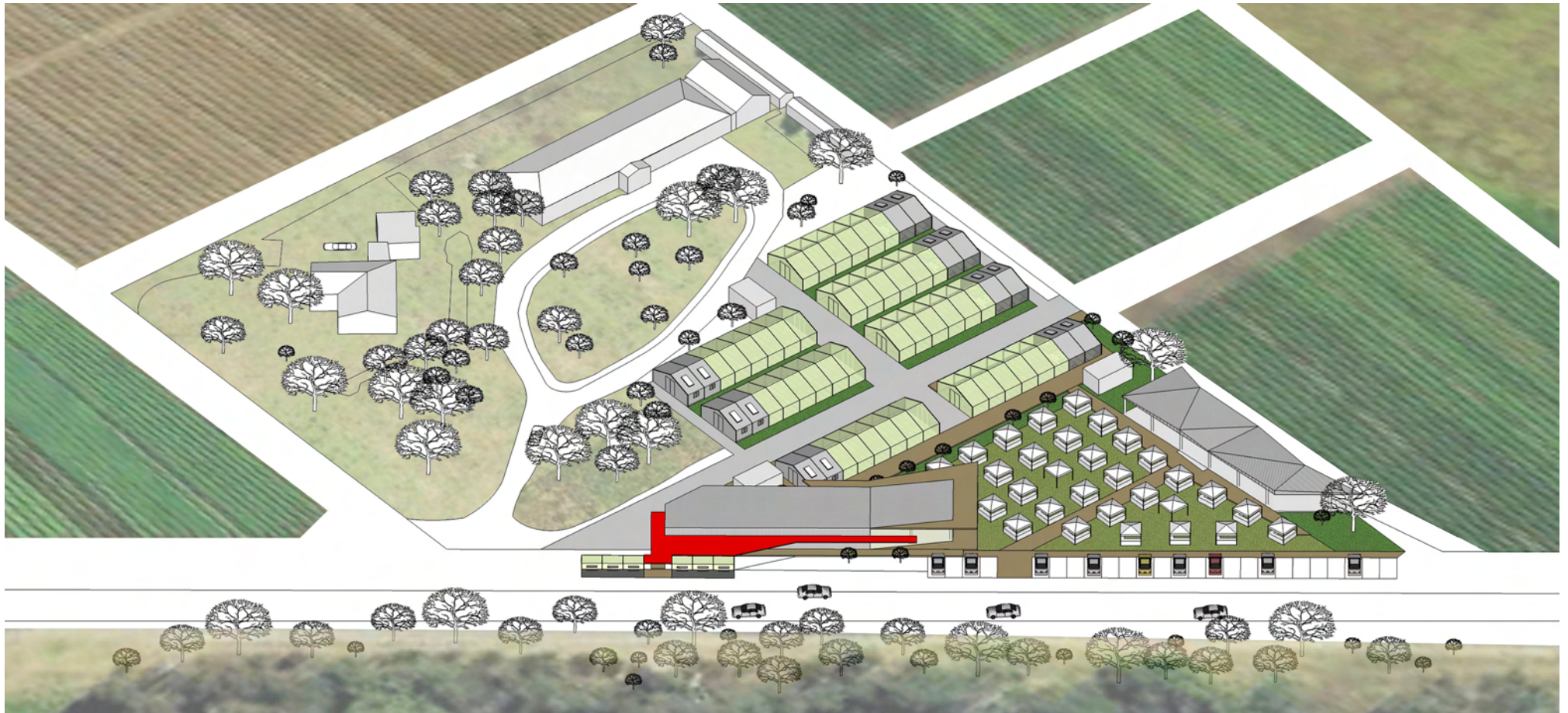
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Preface

The Master of Architecture by Research is undertaken in a studio mode for the first two semesters. The final semester topic is chosen by the candidate. The first semester project was “Marysville: Peripheral Living” investigating the town of Marysville and the North East peripheral area of Melbourne which was heavily affected by bushfire in February, 2009. The outcome of the project was then further developed and tested in Hanoi - the capital of Vietnam with the second project “Hanoi: City in Expansion”. Hanoi was extended significantly in 2008 to accommodate urban migration and modernisation process. The project investigates the West peri-urban zone of the city which is changing significantly. The local agricultural industry is displaced for new urban and industrial projects and the livelihood of farmers is threatening. As part of a comparative study, the final project, “Casey: Transitional Landscape”, chooses Melbourne’s South-East peri-urban zone for the final investigation. Melbourne is also experiencing similar issues with the extension of the Urban Growth Boundary in 2010 to accommodate fast growth in population and shortage of housing. The result of that process will be the displacement of farmlands and local farming industries. The research in Hanoi and Melbourne aims to find transitional strategies for sustainable living environments in peri-urban interfaces environments.

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1. INTRODUCTION

1.1 Introduction on transitional peri-urban zones

Urbanization is a global process, especially in developing countries. The urbanisation process changes urban landscape significantly particularly in the peri-urban zones, the “areas on the urban periphery into which cities expand or which cities influence (‘peri’: around, about or beyond)”¹. These peri-urban areas are in transition from productive landscapes into urbanised areas. This research investigates the impacts of the urbanization process on agricultural production and local inhabitants’ livelihood in the peri-urban zones of two cities: the city of Hanoi, capital of Vietnam and the city of Melbourne, Australia. The research aims at drawing out a “Transitional Approach”, strategies for architecture and urban planning that act over time upon the peri-urban environments by closely examining contemporary agriculture, food production and consumption processes. It also locates itself in the current discourse of architecture and urban agriculture.

Transitional peri-urban zones in Hanoi

The urban landscape of Hanoi, especially the peri-urban interface, is in constant flux. The urbanization and industrialization process after 1986 Economical Reform have changed the urban environment of the city of Hanoi significantly. To accommodate urban migration and population growth, the city of Hanoi’s area was expanded in area 3.6 times in 2008. Large areas of agricultural land have been replaced by industrial and

urban projects. This seriously affects the livelihood of farmers in this area and leads to social, cultural and economical problems that the government has not been able to solve. This process of displacement, industrialization and urbanization, need to be questioned and challenged.

Transitional peri-urban zones in Melbourne

Melbourne is also experiencing the same problems as Hanoi in accommodating the high population growth with its projected population at 5 million before 2030. Melbourne is facing critical challenges in providing affordable housing. However, this challenge is currently met by the displacement of productive farmlands in the peri-urban areas. Such displacement removes primary production, and productive farmland, particularly that close to the city. It is important to maintain the productive landscape which has a variety of roles, such as raising the awareness of public about the importance of food production in the peri-urban zone for the city, exposing of food production process and enhancing local food access.

Transitional Approach

It is defined as an approach taking into account the process of changes over time spatially and programmatically, occurring in the peri-urban environment. By speculating possible future changes, it chooses to act or intervene before developments take place in order to maintain productive landscapes and their in-

frastructures. Proposing supportive architectural and infrastructural interventions can create new models of public spaces for peri-urban communities. These interventions, combined as a network, have a regional impact and create a sustainable living environment for local inhabitants.

Resistance through Transformation

The research asks: Can the existing farming community and industry be transformed and integrated into the new urban developments in the peri-urban zone to resist its displacement? In the case of Hanoi, the investigated site is Mieu Nha village located at the West peri-urban zone of the city. The village is where people live with farmlands surrounding it. How can the typology of the traditional village be transformed and maintained both for cultural and economical benefits of the local people? How can the farming industry be transformed with less resources, yet still be able to maintain the livelihood of farmers and food supply for the city? In the case of Melbourne, the research focuses on the Cranbourne and Clyde areas. The ironic fact is that people live close to market gardens but have difficulties of food access due to poor public transport, and the control of food chain supermarkets excluding local competitions of food supply. How can we maintain productive landscapes in the region to supply local populations and also be able to accommodate new housing demand? The culmination of the research is the third project: Casey: Transitional landscape.

¹ Buxton, M, Alvarez, A, Butt, A, Farrell, S & O’Neill, D 2008, Planning sustainable futures for Melbourne’s peri-urban region, RMIT University, Melbourne, p.25.

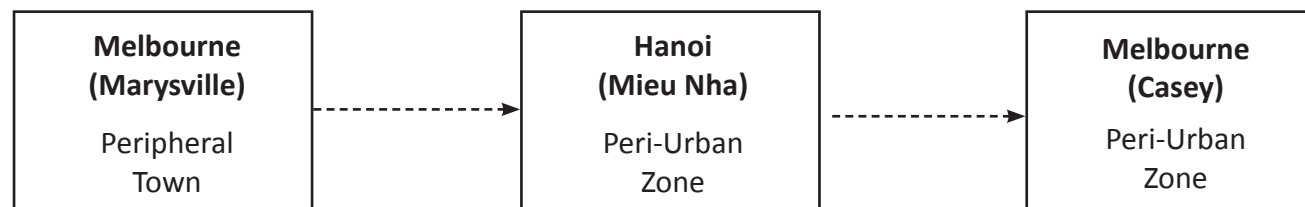


Diagram showing the research process over three semesters in different contexts



Comparison of scale between Hanoi and Melbourne urban boundaries and populations

1.2 Methodology

The methodology of the research includes observation of existing peri-urban environment in Hanoi and Melbourne, comparison of their similarities and differences, applying and extracting design strategies from the two case studies. This back and forward process enriches the understanding of how to act in the peri-urban regions in term of design. The research also refers to and locates itself in the current theoretical framework of related areas of study on peri-urban environment.

The document is split into five sections, which represents the structure of the research.

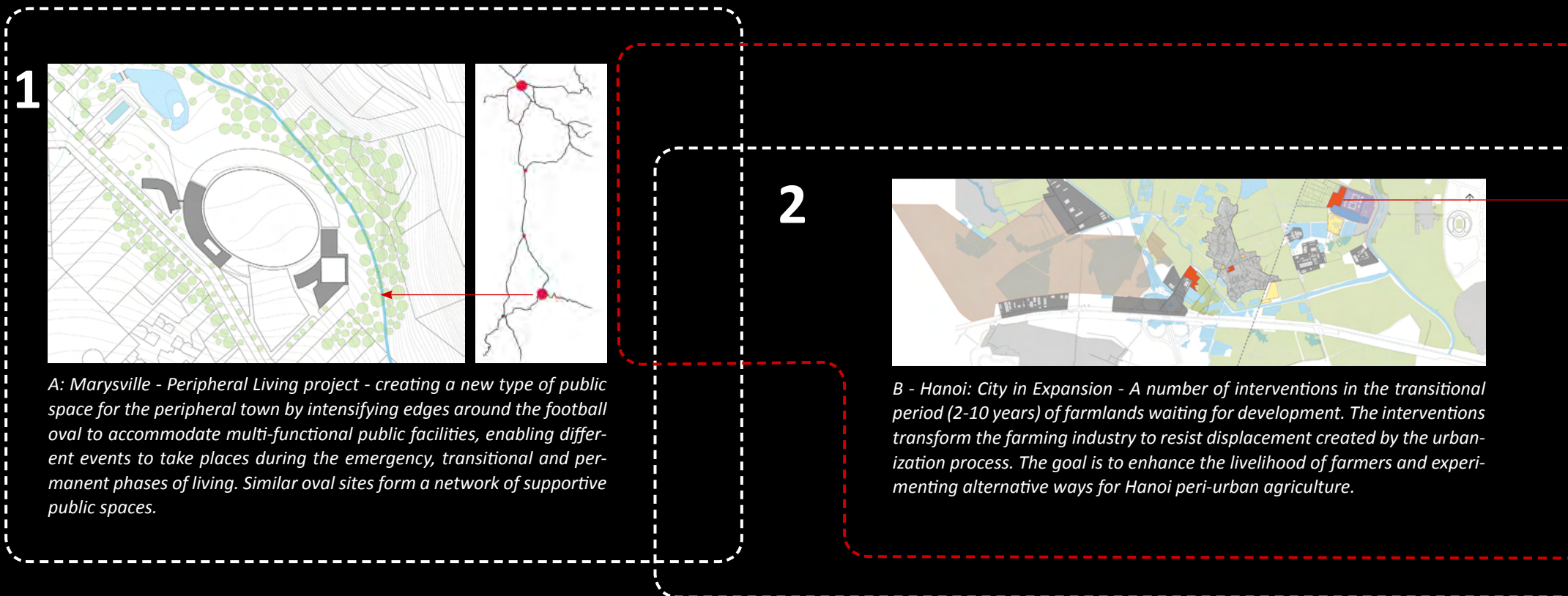
The first section presents Design Strategies explored and developed throughout the research process to formulate the “Transitional Approach”. The strategies are time phasing, edge intervention, cross-programming, and network. Their relevance is tested with case studies and propositions in peri-urban zones.

The second section, Research Precedents, examines projects and theories that inform my research and locating them in the existing body of knowledge. The research themes about peri-urban zone, the relationship between time, architecture, network and landscape infrastructure, the relationship between food produc-

tion, distribution and the city are discussed in relation to precedents.

The third section, Marysville - Peripheral Living, is my first preliminary project which commences the investigation into the public football oval spaces in peripheral towns. The project, providing new transitional public facilities and infrastructure in the town of Marysville after the bushfire event in February 2009, shows the resistance of local conditions towards the super-imposition of events and their transformation through time. From this project, the ideas of transition and time phasing, the intensification of edges to maximize

Fig. Diagram of research process showing interrelationships between the three semesters



shared uses and a network of similar oval typologies creating a regional strategy were taken and subsequently developed in the second semester project and the final project.

The fourth section, Hanoi - City in Expansion investigates the ideas developed in the first project in a different context, Hanoi, the capital of Vietnam. The project starts with observation of the emergence of large scale urban developments in the urban fringe of Hanoi. The project investigates the impacts of urbanization and industrialization process on farming industry and farmer livelihood in Hanoi's peri-urban

zone. Applying the time phasing, intensification and cross-programming strategies as well as the analysis of land/labor relationship, the project seeks to test alternative ways for urban farming and the transformation of local conditions to resist the current forms of development.

The fifth section, Casey - Transitional Landscape is the final project of the candidature. It brings together knowledge from the first two projects and uses Melbourne as the final location of the research. The purpose of Melbourne case study is to explore different aspects of research that are not been tested in Hanoi

and understanding Melbourne's urban environment. The project investigates the relationship between food production and consumption under the effects of Melbourne @ 5 million scheme's urban growth boundary expansion in Casey area. The investigated site includes a large territory of Cranbourne North and the new urban growth area around the town centre of Clyde. Different architectural, landscape and infrastructural interventions help to create a sustainable living environment for local people by designing for access to food as well as raising the awareness of the public about the importance of local productive landscape.



The hybridization between farming and permanent programs such as prison create opportunities transform and maintain the existence of agriculture in peri-urban zones.



C: Casey - Transitional Landscape - Maintaining the market garden area as an agricultural hub around the Clyde town center. A network of similar sites is strategically proposed in the urban growth area of Casey to create a sustainable peri-urban living environment.

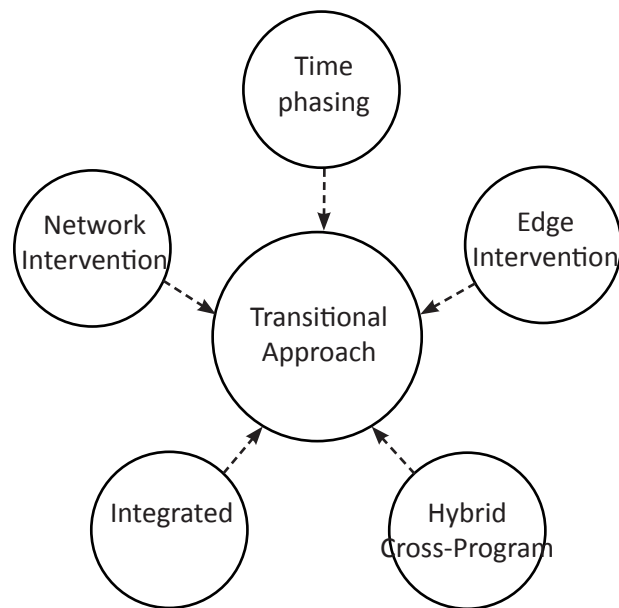


Intervention case study: The hybridization between greenhouses, public infrastructure and food distribution supports the existence of market garden area and creates a new model of public space for peri-urban communities.

2. DESIGN STRATEGIES OF THE TRANSITIONAL APPROACH

Design Strategies

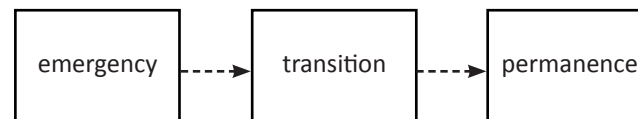
The following design strategies are developed through case studies of peri-urban zones in Hanoi and Melbourne. Together, they formulate the “Transitional Approach” for the fields of architecture and urban planning to act upon peri-urban environments strategically. They are tested by urban, landscape and architectural as well as infrastructure propositions at different scales.



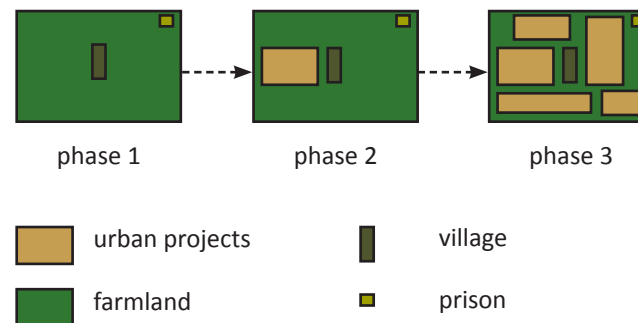
Strategies formulate the Transitional Approach for the peri-urban environments

2.1 Time phasing strategy

Speculating on changes of a particular urban environment through time helps to choose critical points for intervention. The strategy was first formulated in the Marysville project with 3 phases of time: emergency, transition and permanence. The strategy has been developed in the Hanoi and Casey projects with the changes to peri-urban zones; the filling up of farmland with urban and industrial projects. Intervening, before development, transforms the existing farming industry, generates opportunities to resist total displacement of local industries and culture and creates a sustainable living environment. To think about time is to think about processes rather than products.



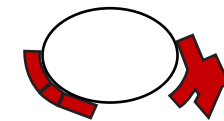
Time phasing strategy emerged in Marysville project to speculate events and activities in the football oval



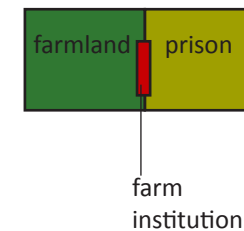
Time phasing strategy used in Hanoi project to speculate changes of the peri-urban productive landscape

2.2 Edge intervention strategy

The expansion of cities triggers the question of whether a city has a defined boundary or edge. When cities grow, their boundaries will change, especially in cities such as Hanoi and Melbourne where urban sprawl is serious problem. Thinking about an edge is about how to define a boundary that stops not just urban sprawl: the edge between rural and urban areas can be a hybrid zone of mixed programs that are semi-rural and semi-urban. In the Marysville project, the edge of the oval is intensified to turn it into an important public venue for the town. In the Hanoi project, the interventions into the edges between farmlands and other programs such as prison, market or factory helps to maintain farming activities. In the Casey project, the interventions into the interfaces between market gardens, industrial plants, residential areas and Clyde town centre will support the operations of the market gardens and increase local food access.



Marysville project: Interventions in the transitional phase around the edge of the oval to provide public facilities for the town of marysville

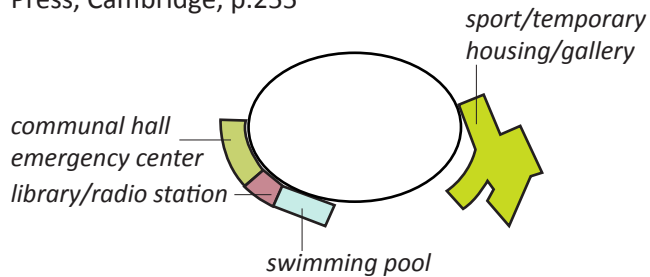


Hanoi project: Intervention in phase 2 on the edge of farmlands and the prison to provide a farming institution educating farmers and prisoners on new urban farming technologies which use less resources of land and water

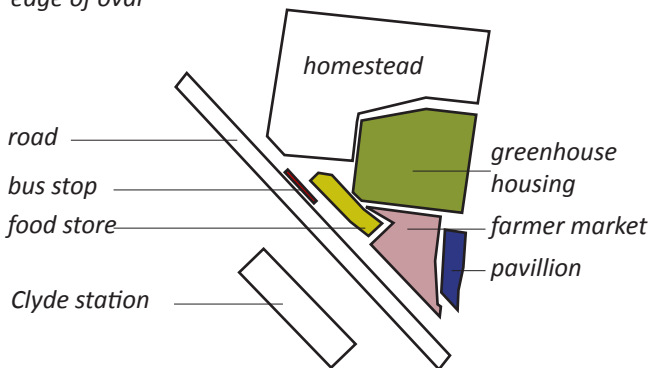
2.3 Hybridization/Cross-programming strategy

The hybrid of different functions generates interesting relationships spatially and programmatically. In the Marysville project, the edge of the oval is intensified by a range of public facilities such as library, swimming-pool, radio station and communal hall. They create a better public infrastructure for the town and respond more effectively to emergency events. In the case studies of Hanoi and Melbourne (Casey), the combinations between agricultural production and other programs such as market, factory, and prison as well as transport infrastructure are tested. This hybrid of activities provides new models of public spaces for peri-urban communities. The idea of cross-programming which is the juxtaposition of different and unrelated programs¹

¹ Tshumi, B 1994, *Architecture and Disjunction*, MIT Press, Cambridge, p.255



Marysville project: hybridisation of programs around the edge of oval



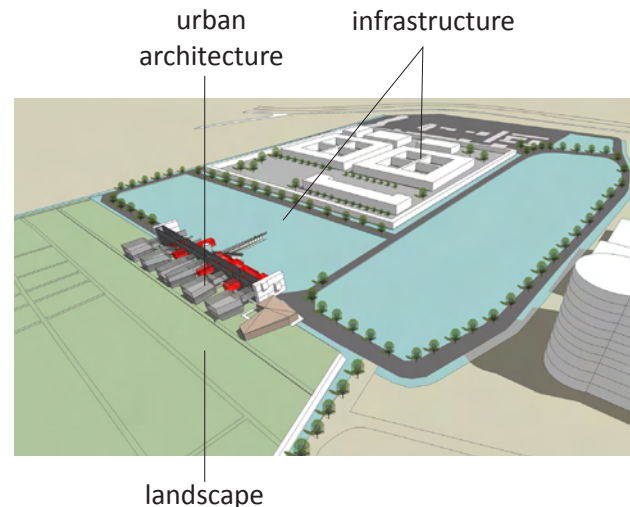
Casey project: hybridisation of programs on the edge of market garden

has been discussed by Bernard Tschumi in his book "Architecture and Disjunction". Rem Koolhaas's early research on highrise buildings in Manhattan revealed the juxtaposition of unrelated programs vertically sharing only the building structure that creates unexpected relationships.²

2.4 Integrated Strategy

The investigations of peri-urban zones in Hanoi and Melbourne combines related disciplines such as urban architecture, landscape and infrastructure. It shows a broad scope of considerations in order to come up with design decisions. In the peri-urban zones, landscape dominates the environment. Although architectural interventions are small compared to the vast scale of landscape, they are critical to the daily life of

² Koolhaas, R 1994, *Delirious New York*, The Monacelli Press, New York, p. 157



Hanoi project: Integrated strategy of landscape (farmland), urban architecture (farming institution) and infrastructure (prison)

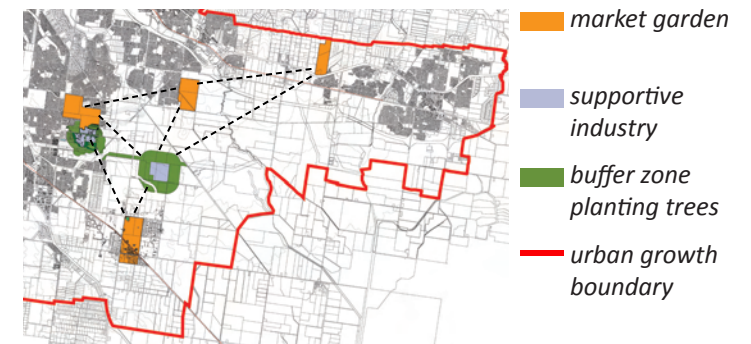
local inhabitants. The infrastructures such as transport systems or water supply, support the operation of productive landscapes as well as connect the peri-urban zones to their city centers.

2.5 Network intervention strategy

The combination of architectural and infrastructural interventions creates a network of supporting points for either responding to emergent events or maintaining farmlands for local food production. This strategy helps to overcome isolated consideration of architectural objects and start thinking about urban relationships and systems. In the Marysville project, the network of oval sites provide multiple evacuation points for local people in bushfire events. The Hanoi interventions provide a series of different sites for farming integration and education. The Casey project provides a network of maintained market gardens which increase local food access in the new urban growth areas.



Marysville project: network of ovals as evacuation points



Casey project: maintaining agricultural zones

3. RESEARCH PRECEDENTS

3.1 Introduction - This chapter will discuss the following precedents and research that inform my research:

1. Peri-urban zone research

The two books “Planning sustainable futures for Melbourne’s peri-urban region” by Buxton (et al 2008) and “Melbourne’s green belt and wedges: a short history of open places and spaces in the city and their strategic context” by Harris (2005) provide a theoretical framework for my research into the peri-urban zones of Melbourne and Hanoi. Buxton (et al 2008) discusses the definition of the peri-urban zone and research outcomes of the Melbourne peri-urban zones. Harris (2005) discusses about the changes over time of Melbourne’s greenbelt and wedges which also relate to my area of interest on agriculture areas around the edge of the city.

2. Time/ Flexibility/ Network Infrastructure

There are several projects which use time to speculate how an architectural or urban environment changes or evolves and to design for change to occur. The first precedent is Shiregu Ban’s the Naked House in Saitama, Japan. The house explored the relationship between time and flexibility. This project influenced my design strategy for the first project - Periphery Living which explored multi-functional public infrastructure in Marysville. The second precedent is the work of Italian architect Andrea Branzi who, in his theory Weak Urbanism, discusses the relationship between Architecture and Agriculture. The third precedent is a collection of temporary urban interventions in Berlin by Denton (2007). The book discusses the transformation of vacant lots of land, those waiting for development, into successful community infrastructures. This is relevant to both Hanoi and Melbourne projects. The fourth precedent is the Potteries Thinkbelt project by Cedric Price who explored an educational network infrastructure and temporary housing in 1966. His project is relevant to my research in terms of time strategy and network infrastructure which has a regional scale

impact on peri urban environment.

3. Time/ Event/ Edge/ Landscape

The investigation of peri-urban zones shows a need of considering landscape as an indispensable component of the discussion because one of dominant features of peri-urban zones is productive landscape. The first group of precedents for the first project - Peripheral Living are the theoretical work on the relationship between events and landscape by the French cultural theorist and urbanist Paul Virilio, the Burning Man Festival USA which explores the idea of temporary community on desert and Yves Klein’s fire paintings which stimulate thoughts on the nature of fire and the edge of the oval. Thinking about the edge of the city and the edge of the oval makes us imagine about a transitional zone which could be intensified to respond to different programs and conditions. The next precedent is the work by landscape architect Michel Desvigne and the architect Jean Nouvel who explores productive and recreational landscape infrastructures at an urban scale, discussed in the book “Ecological urbanism” (Mostafavi & Doherty 2010). This is related to both the second and the final projects in Hanoi and Melbourne. The last precedent is the theoretical work of landscape architect James Corner and Field Operations on the process of time in designing landscape which is one of the principles of Landscape Urbanism.

4. Hybridization/Cross-programming

Bernard Tschumi discussed in his book “Architecture and Disjunction” on the concept of “cross-programming” which is the juxtaposition of different and unrelated programs.¹ Another precedent is Rem Koolhaas’s research on the Program. Starting with researching high-rise architecture in Manhattan in his book “De-
¹ Tschumi, B 1994, *Architecture and Disjunction*, MIT Press, Cambridge, p. 255

lirious New York”, Rem Koolhaas examined the notion of the “Program” and questioned the maxim “Form follows Function”, first popularized by architect Louis Sullivan at the beginning of the 20th century. An early design method derived from such thinking is “cross-programming” or functionality crossed introducing unexpected programs as a complimentary to the main programs. The book “Made in Tokyo” by Atelier Bow Wow presents interesting hybridized urban typologies due to the constraints and density of urban environment in Tokyo. All of these precedents are useful for my three projects.

5. Food Production, Distribution and Urban Spaces

The research on Melbourne markets history from 1841-1979 by Coles(ed. 1980) presents an interesting investigation of the both systematic and spatial roles of wholesale market in food distribution and consumption of Melbourne. The markets were not only for food, but also the public domains where people from all over Melbourne interact and enjoy social life. Another research on contemporary supermarket food chain production is the film Food, Inc., about the American food chain production system. Finally, the Collingwood Children Farm in Melbourne is an interesting precedent for me to think about community recreational farming and its adjacency to residential areas in Melbourne suburban environment. It not only changes the way we live, introducing rural lifestyle to urban inhabitants, but also creating a sustainable and enjoyable environment for the families and kids living in the city.

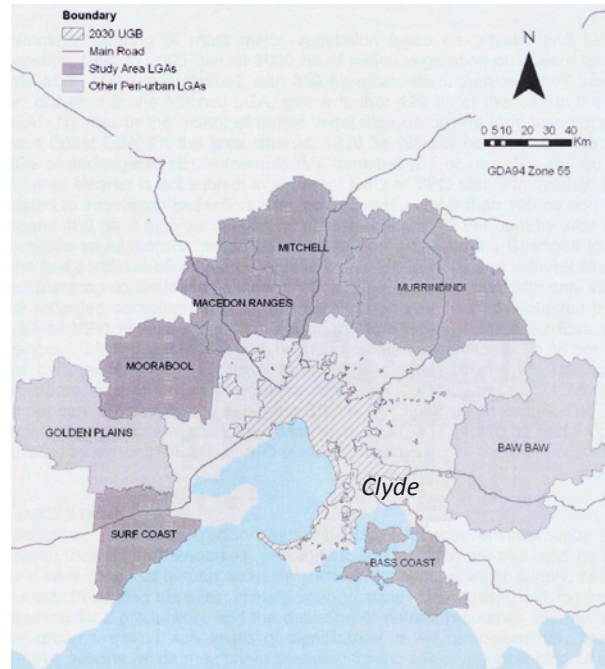
3.2 Precedents

Peri-urban zone research - Melbourne

The research of Michael Buxton(et al 2008) and George Harris(2005) on the peri-urban zone and the green belt and wedges of Melbourne are useful precedents for my research because they set a framework for investigation into these areas.

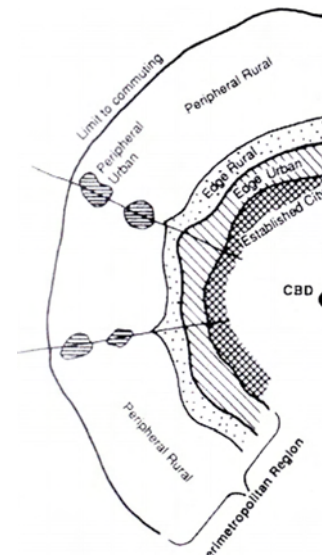
According to the peri-urban map by Buxton(et al. 2008), Cranbourne and Clyde (suburbs of the city of Casey) are located in the inner peri-urban zone to the South East of Melbourne. As we can see in the growth diagrams(MMBW, 1954a), the strong population growth resulted in urban sprawl in Melbourne with more built areas to the East and South East of the city. In 2010, the urban growth boundary of Melbourne has been expanded with five new urban growth areas: Whittlesea, Hume, Melton/Caroline Springs, Wynham and Casey

The schematic diagram of peri-metropolitan zones by Burnley and Murphy (1995) shows interesting divisions and layers between urban and rural areas in Melbourne. The small towns are labelled Peripheral Urban. Examples of this type in my research could be Marysville and Clyde. These peripheral towns are located in rural landscape but still rely on the urban infrastructure such as railway, roads or recycled water supply as well as economic infrastructure and employment. By thinking about the relationship between these peripheral towns and the city, new strategies could emerge to respond to their unique conditions, a possible hybrid system of integrated urban and rural condition.

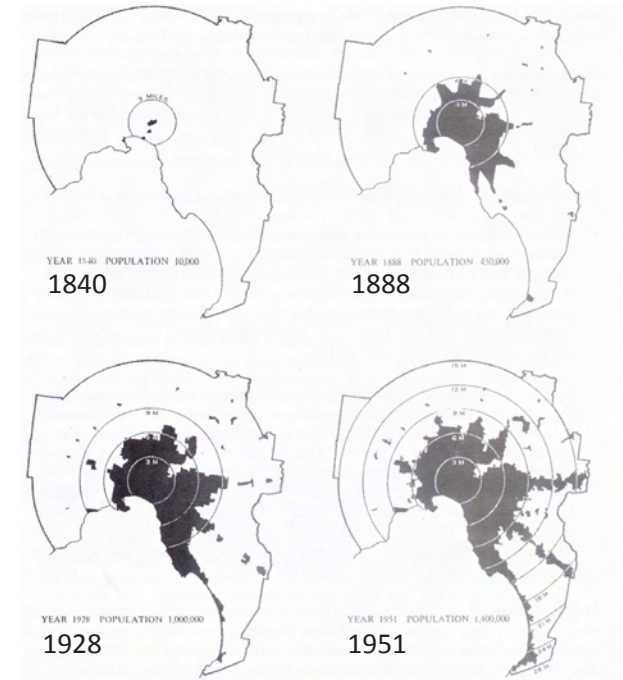


Outer and Inner peri-urban melbourne areas
Source: Buxton (et al.) 2008

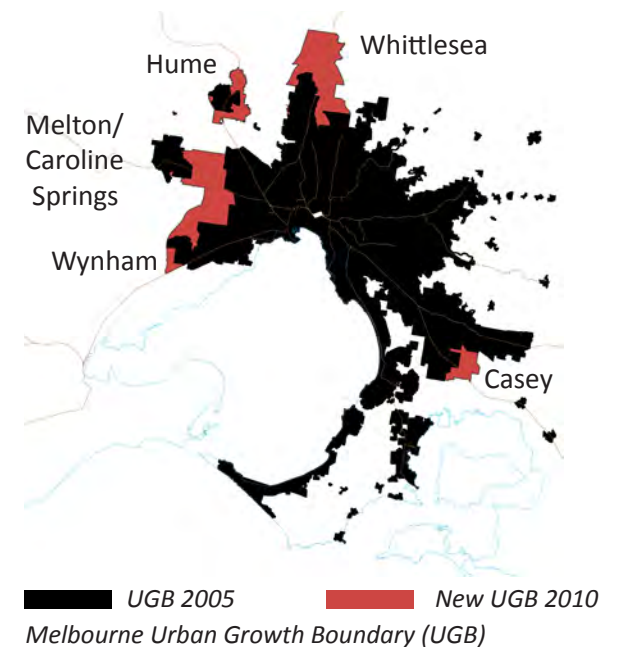
■ Outer peri-urban ■ Inner peri-urban



Schematic diagram of peri-metropolitan zones - Source: Burnley and Murphy 1995



Growth diagrams (MMBW) 1954a
Source: Harris 2005



■ UGB 2005 ■ New UGB 2010
Melbourne Urban Growth Boundary (UGB)

Time and flexible architecture: Shigeru Ban's the Naked House, Saitama, Japan, 2000

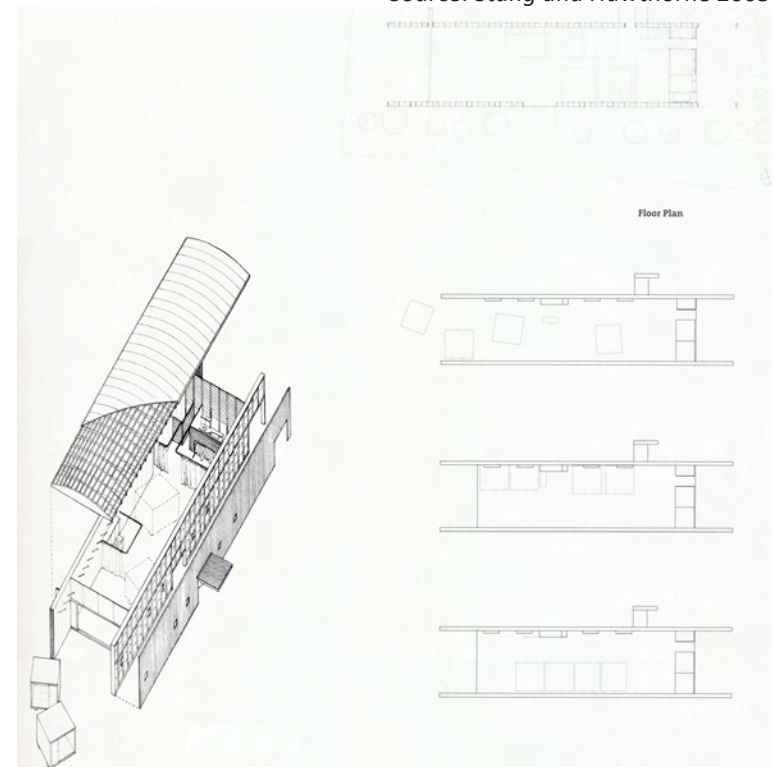
The house designed by Shigeru Ban is an interesting example of flexible architecture. The aim of the project is to provide the least privacy so that family members are not isolated from one another. They can gather in a big shared space. The house consists of one large space of two-story high which allows four personal rooms on small wheels moving liberally. These rooms hold light fittings to reduce weight and maximize mobility. They can be combined to create a larger room or moved outside to free the internal space. The house is like a public space in a private environment. Flexible planning and design allow different configurations and changes according to different circumstances. It is a helpful lesson for the design of public facilities around the oval which should also be flexible and responsive to changes.



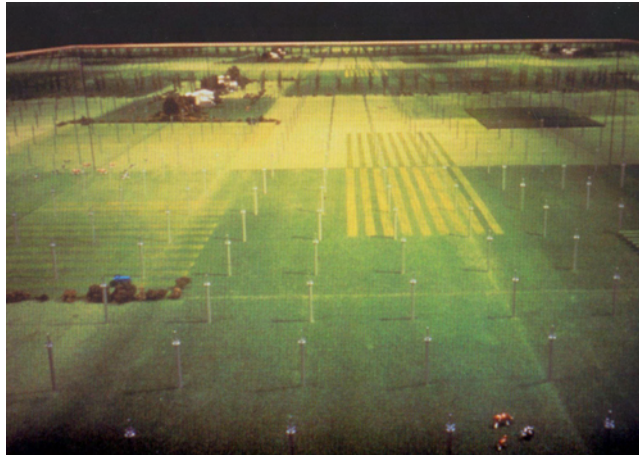
Personal room view and service area
Source: Stang and Hawthorne 2005



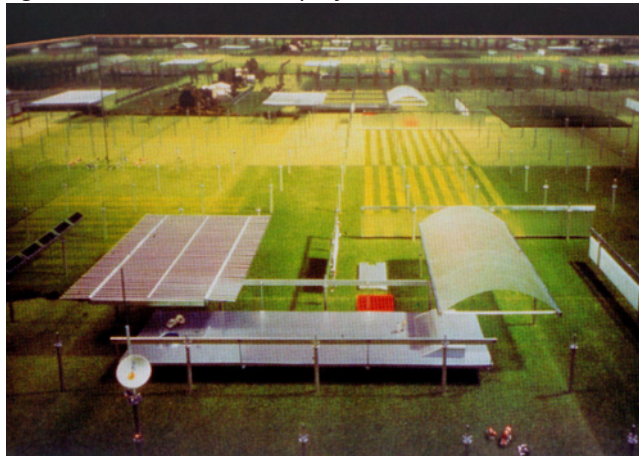
Interior view of the Naked House
Source: Stang and Hawthorne 2005



Plans and axonometric view
Source: Stang and Hawthorne 2005



Agronica - Weak Urbanism project, Andrea Branzi 1995



Weak Urbanism and the relationship between Architecture and Agriculture - Andrea Branzi

Andrea Branzi is an Italian architect and designer. He was among the founders of Archizoom Associati, and promoter of Italian radical architecture. His research on the relationship between architecture and agriculture resulted in the theoretical work of "Weak Urbanism" which refers to "a concept of reversibility and a traversable quality of typical agriculture, and they indicate a way of understanding structures as a temporary, light, elastic reality set within a constructed territory but mixed in with agricultural production as well."¹ The aim of weak urbanism is looking for models of a relational architecture not defined by precise functions or programs but allow different activities and changes according to time or even seasonal ones.² One of his projects as design experimentation for weak urbanism is the Agronica project for Domus Academy Research Center in 1995. Its scope of design includes part of a territory in between the city and village, next to traditional transport system and market.³ Its context is quite similar to the peri-urban zone in my

¹ Branzi, A 2006, *W & W : weak and widespread*, Skira, Milan, p.132.

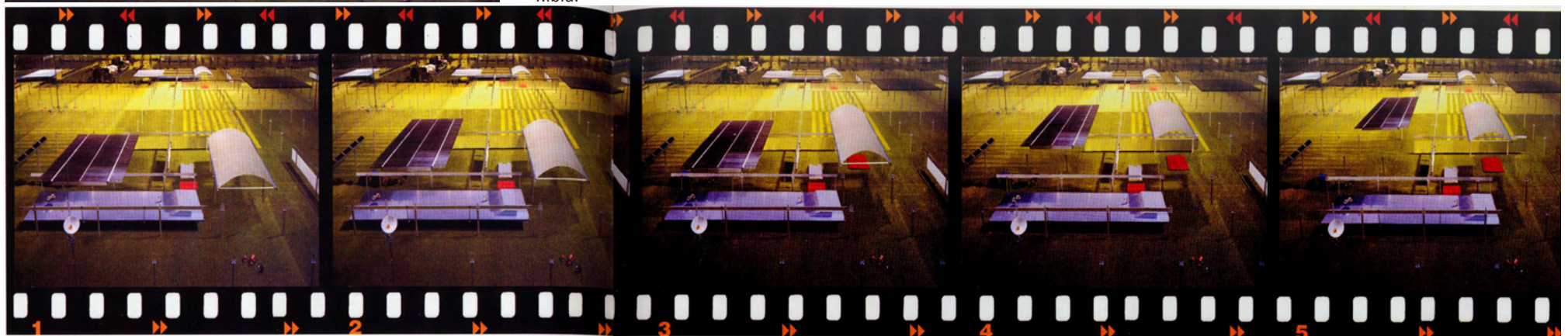
² Ibid.

³ Ibid., p.134.

⁴ Ibid.

research. The aims of his project is to guarantee "the survival of agricultural land and natural landscape in the presence of evolved, but no longer totalising, urban services"⁴ Agronica provides a productive agricultural landscape using the system of agricultural posts, single architectural elements like roofs, walls or platforms which move or group together or dispersed according to users' needs to create a semi-agricultural and semi-urbanized territory.⁵ On the one hand, this is an interesting experimentation exploring the relationship between agriculture and architecture as well as exploring the ideas of time (temporary) and flexibility. On the other hand, it is limited and has not taken into account the urban sprawl problem in contemporary cities today. How can the project deal with the urbanisation pressure in the city fringe and maintain agricultural production in this area? The aim of the project is looking for a temporary and flexible model but the grid of agricultural posts seems to control and defined the movement of architectural elements and make it less flexible. The project needs to consider other ways of designing the flexible system.

⁵ Ibid., p. 136.



Agronica time sequence, Andrea Branzi 1995

Temporary urban interventions in Berlin

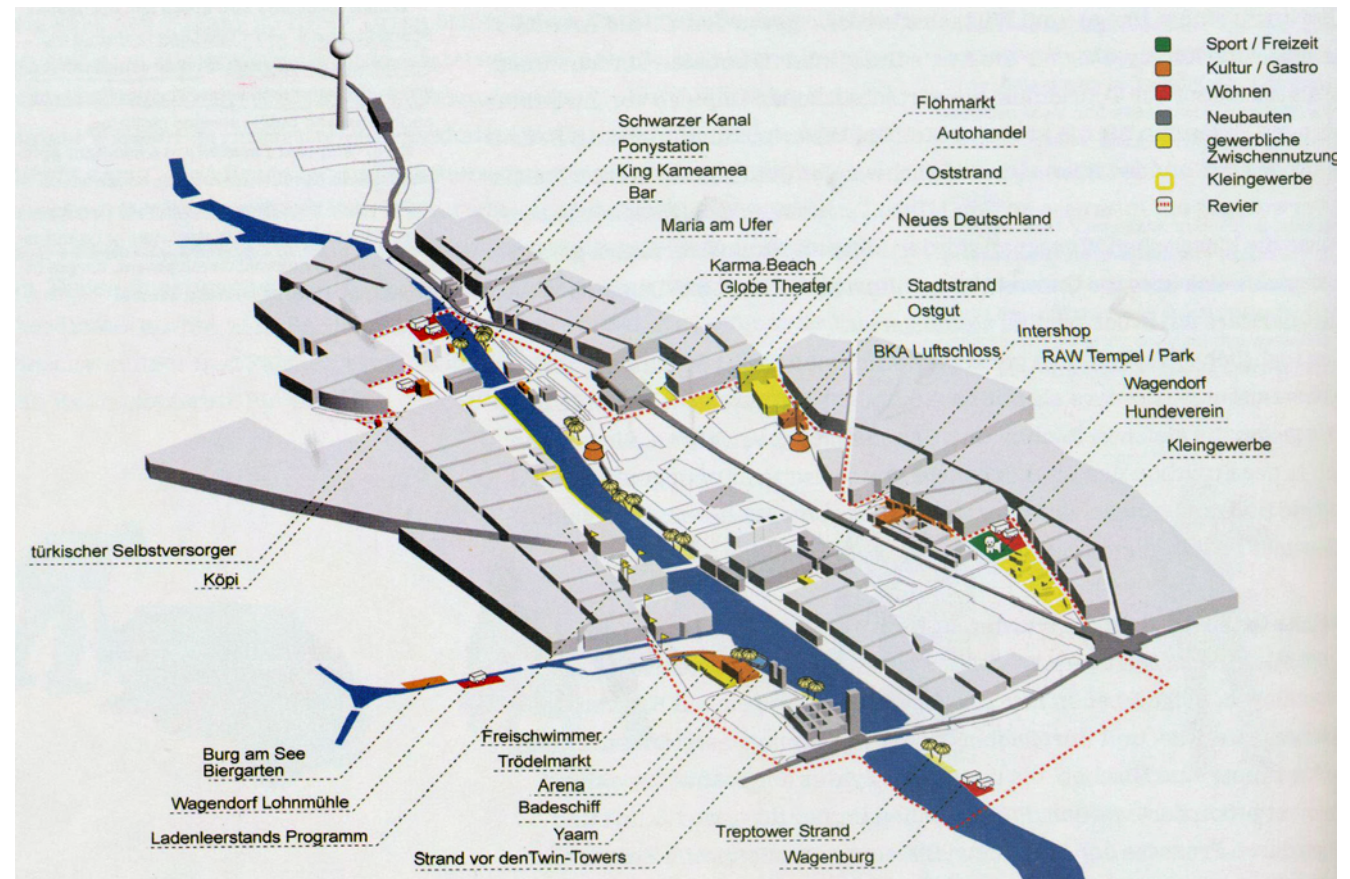
The temporary use projects investigated in this book are precedents for one of my project in Hanoi research which is the temporary adaptive livestock factory. These temporary projects are located in urban land waiting for development and unused for a period of time. The key for these projects to work is that they need to be accessible with intact infrastructure and a network of potential users. ¹ Therefore it is a combination of

1 Stadtentwicklung durch Zwischennutzung = Temporary use and urban development in Berlin, Jovis, Berlin, p.42.

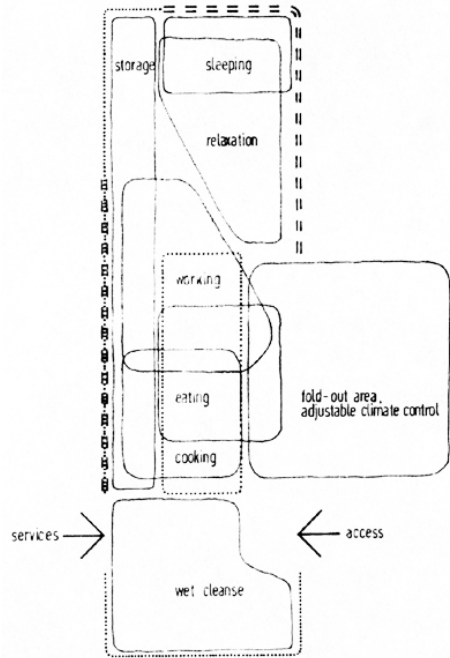


Community activities in temporary use space - Berlin

accessibility, infrastructure and community that will make temporary use projects possible. It is a very strong strategy that is applicable for unused urban spaces which temporarily unsuited to traditional commercial exploitation. It is relevant to consider this strategy in the context of farmland waiting for development in Hanoi and Melbourne.



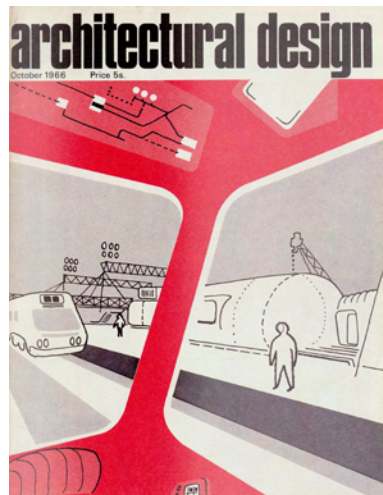
The diagram shows a high concentration of temporary use projects around the banks of the river Spree in former East Berlin. Source: Denton 2007



- == clear glazing panels with louvred privacy control
- translucent panels
- translucent panels above clear glazing

Diagrammatic plan showing overlap of function zones - Typical housing unit. Cedric Price

Source: <http://www.audacity.org/SM-26-11-07-03.htm>



Cover drawing for Architecture Design, 1966. Cedric Price

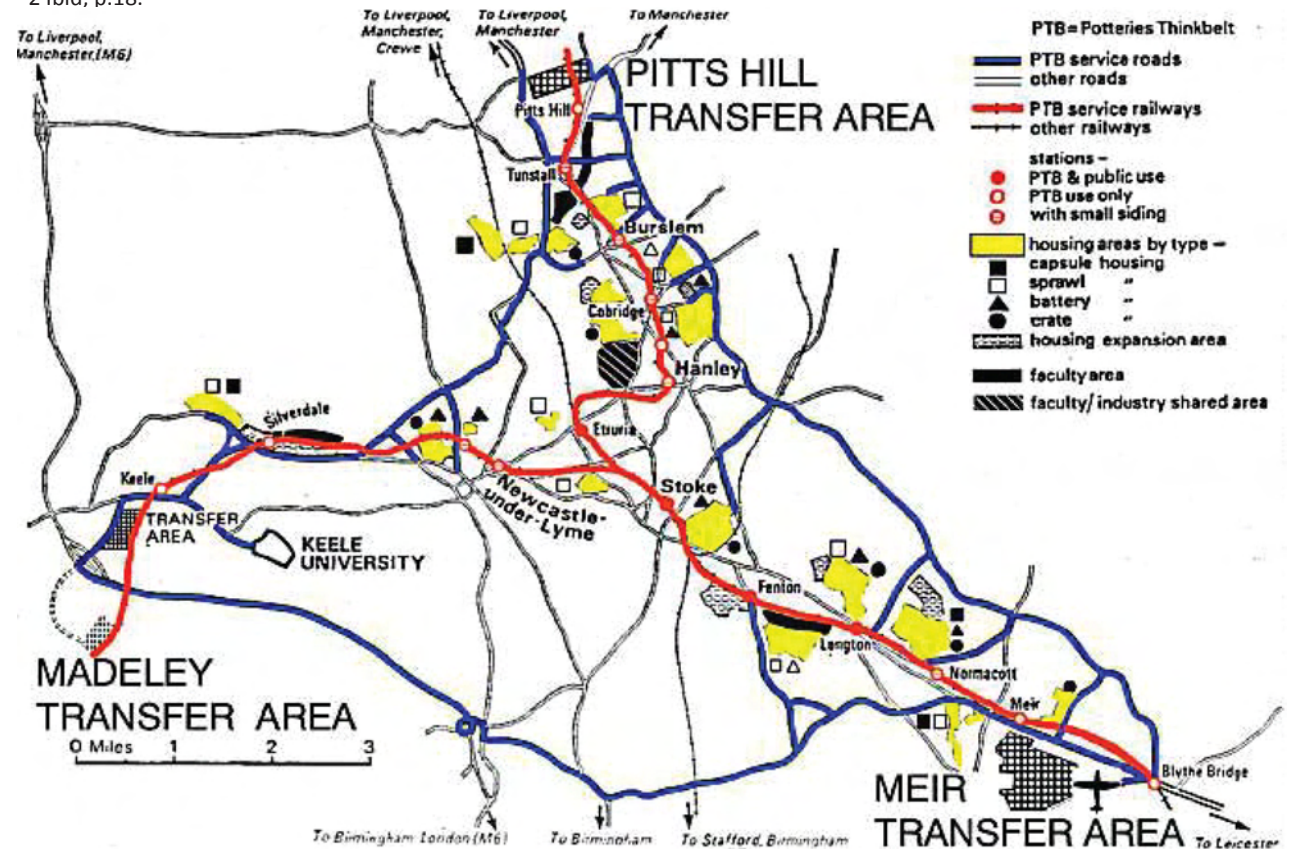
Potteries Thinkbelt - Cedric Price

The Potteries Thinkbelt is an unbuilt plan by the English architect Cedric Price for a 20,000 student campus in North Staffordshire, England¹ which is built around a road and abandoned rail network. The project emphasises temporary housing and connect the students with the community. In the project, there are four types of housing: crate, sprawl, battery and capsule². Occupancy by users who are thinkbelt students, teachers and administrators are designed

1 Hardingham, S & Rattenbury, K (2007), Cedric Price : Potteries Thinkbelt, Routledge, Abingdon, p.17.

2 Ibid, p.18.

according to phases allowing expansion and growth through time. This is a very interesting project which takes into account time, mobility, and infrastructure to create a regional education system and it also influences the economical and technology development of the region. The Potteries Thinkbelt is related to Peripheral Living project and also stimulates thoughts on how to locate architectural interventions strategically along infrastructure system in my major project.



Potteries Thinkbelt, regional site plan, 1966. Cedric Price Archives, Canadian Centre for Architecture, Montreal.

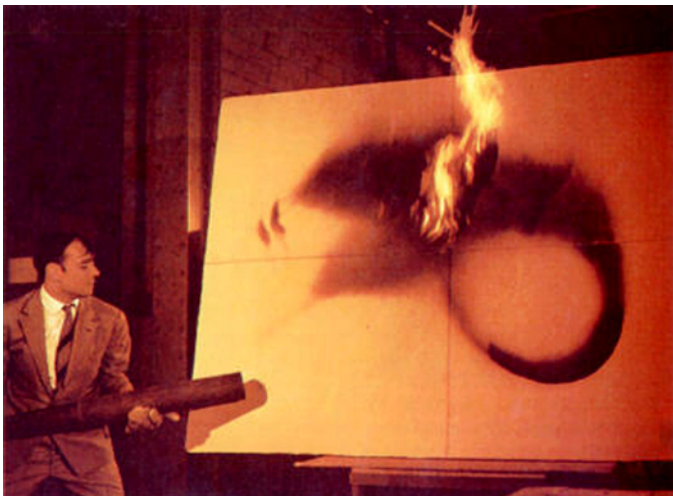
Source: <http://www.audacity.org/SM-26-11-07-03.htm>

Events and landscape

“ It was no longer in the event just taking place or that has just taken place, but rather in the anticipation of an event”

(Paul Virilio)
(*Politics of the very worst*)

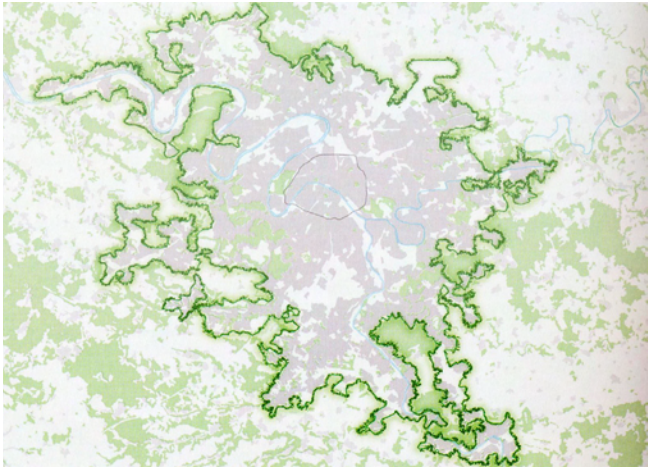
The dominant feature of the peri-urban zones before urban development is landscape which is productive, recreational or conservative. Landscapes are potential sites for events to happen in a variety of scales. The extremely large scale events are natural disasters such as bushfires or floods. The medium to large scale could be festivals such as music, foods and sports. The human scale could be how we interact and occupy landscape in an intimate way. The events enrich landscape and vice versa. By thinking about this relationship between events and landscape, we could find strategies that respond effectively and efficiently to emergent events.



These fire paintings by Yves Klein provoke thoughts on the nature of fire and the edges of the oval.



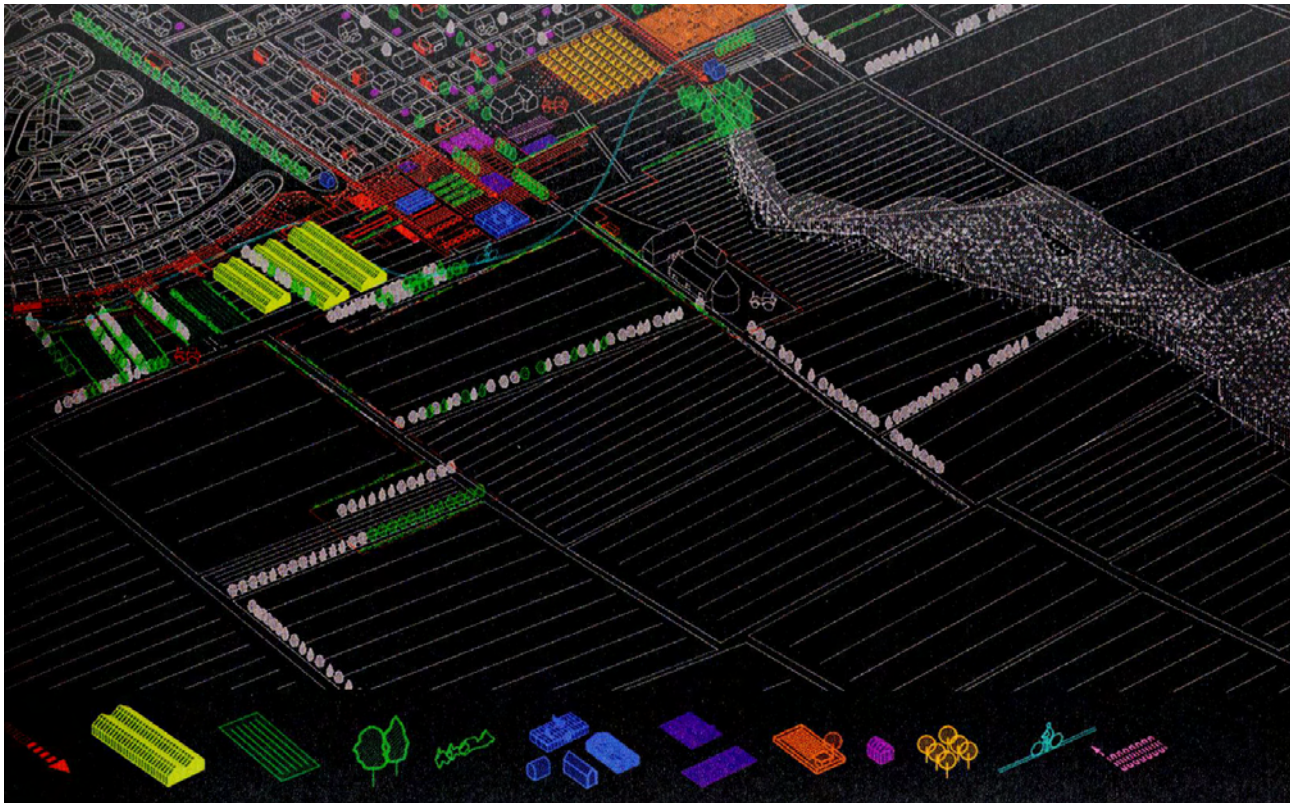
The Burning Man festival in Nevada is an experimental project on temporary community. People camp around a strong centralized space.



Lisieres project for Paris - Michel Desvigne, Jean Nouvel, 2009



Agricultural gardens: first phase. Ile Seguin, Boulogne-sur-Seine - Michel Desvigne, 2009



Lisieres project for Paris. Detail of band with greenhouses, allotment gardens, hedgerows, and orchards; Michel Desvigne, Jean Nouvel, 2009

Productive and Recreational Landscape Infrastructure **Michel Desvigne and Jean Nouvel**

In several of his works, French landscape architect Michel Desvigne seeks “a spatial framework for future urban development”¹ and “a landscape infrastructure that precedes architecture”². At a regional scale, his 2009 proposal for Grand Paris with Jean Nouvel created an urban-agricultural band around the periphery’s *lisiere* - “a term describing a forest edge or a seam”³. The 800 kilometer *lisiere* between Paris and the surrounding agricultural zone provide a new type of productive landscape infrastructure which is accessible to all users. This project provides my research with a good example of how to insert agricultural production and landscape infrastructure into the edges between suburban residential developments and farmlands in the peri-urban zones. However, the scale of operation in this project is massive and utopian. The question is who manages these landscapes and in what conditions make these landscape infrastructures possible?

1 Mostafavi, M & Doherty, G (eds.) 2010, *Ecological urbanism*, Lars Muller, Baden, p. 265.

2 *Ibid.*, p. 265.

3 *Ibid.*, p. 266.

Landscape urbanism

In his writing "Terra Fluxus", James Corner discusses four themes that organizes the emerging landscape urbanist practice. One of the theme that is relevant to my research is process over time:

*"Processes over time: The principle is that the processes of urbanisation - capital accumulation, deregulation, globalisation, environmental protection and so on - are much more significant for the shaping of urban relationships, than are the spatial forms of urbanism in and of themselves"*¹

In James Corner's projects, time play an imporant role in shaping the design of how landscape evolves through different phases as we can see in the phasing diagram of the Fresh Kills Park in Staten Island, New York. His projects and theoretical works contribute to the Landscape Urbanism movement which is defined by Christophe Girot as *"a term that has been coined to depict the study of urbanised landscapes of the second half of the twentieth century. It is meant first and foremost to decipher what happened in city landscapes of the last decades and to consequentially act upon them"*². Landscape Urbanism is a helpful theoretical reference to locate my research on the impacts of urbanisation on productive landscapes. At the time of doing the first two projects, I have already used time phasing as a tool to deal with the periphery and peri-urban landscape. This shares a similar technique of using time in Landscape Urbanism.

¹ Waldheim, C (ed.) 2006, The landscape urbanism reader, Princeton Architectural Press, New York, p.28.

² Ibid., p.89.



Fresh Kills Park , Staten Island, New York - James Corner, Field Operations



Fresh Kills Park - Phasing development Diagram, Staten Island, New York - James Corner, Field Operations
Source: Corner(ing) the Market, viewed 10 February 2011, <<http://landscapeandurbanism.blogspot.com/2008/11/corner-ing-market.html>>

Hybridization/Cross-programming

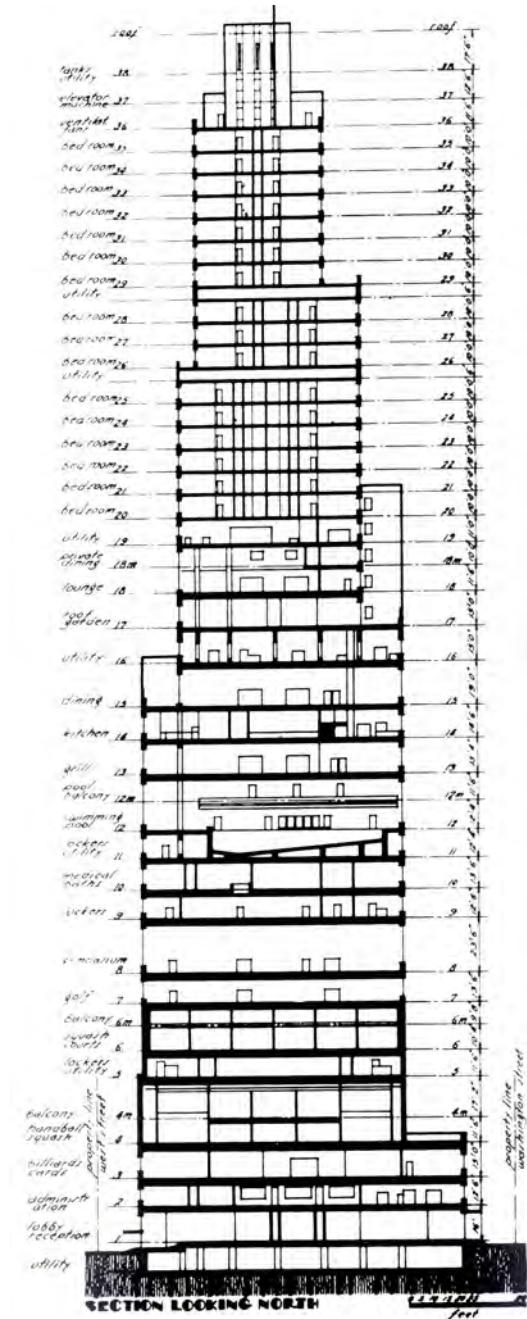
In his book “Delirious New York”, Rem Koolhaas investigated the high-rise buildings in Manhattan with particular attention to the plan and programs inside these buildings. One of the high-rise buildings is the Downtown Athletic Club. In the section (image in the far left), the first to the twelfth floors have “corresponded to increased subtlety and unconventionality of the “programs” offered on each platform.¹ The next five floors are “for eating, resting and socializing” with dining rooms, lounges and a library. The 20th to the 35th floors contain only bedrooms. Rem Koolhaas observed that it is a “Manhattan’s version of functionalism distorted by the demands and opportunities of density and congestion”.² It is the juxtaposition of unrelated programs vertically sharing only the building structure that creates unexpected relationships. The cross-programming strategy has been developed in all projects in my research.

The book “Made in Tokyo” by Atelier Bow-Wow also presents a fantastic collection of urban typologies in Tokyo. The idea of hybridization which combines cross-category programs such as infrastructure, farming and architecture (Typologies 02 and 52 in the left) is effective in providing new models of multi-functional spaces. There is a clear logic that “different activities are brought together by physical convenience such as scale or adjacency”.³ These are interesting found conditions that could be used for intensifying the public spaces in Hanoi and Melbourne researches.

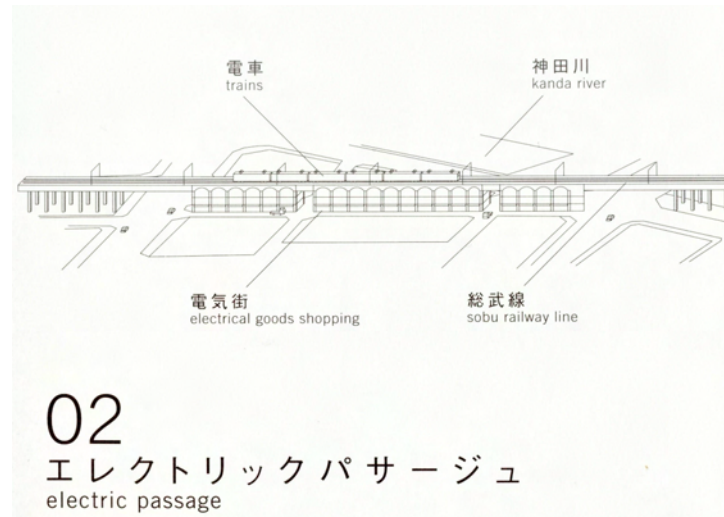
¹ Koolhaas, R 1994, Delirious New York, The Monacelli Press, New York, p. 157

² Ibid.

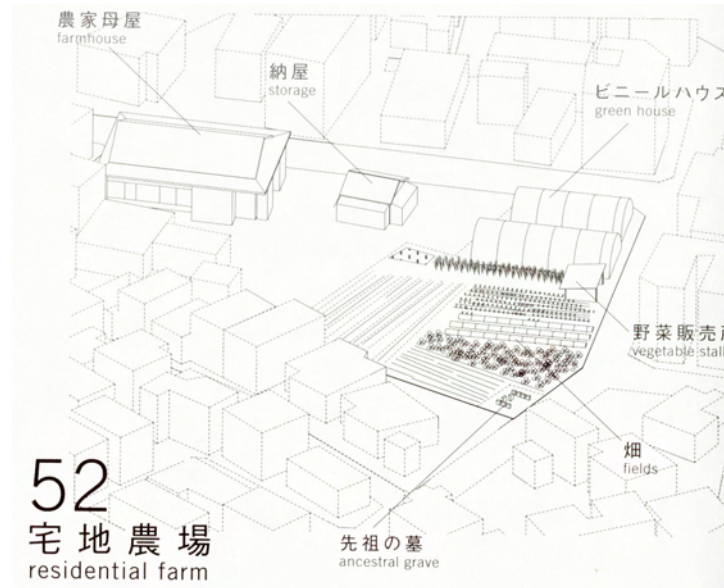
³ Momoyo, K, Junzo, K & Yoshiharu, T 2001, Made in Tokyo, Kajima Shuppankai, Tokyo, p.23



Downtown Athletic Club in New York. The section shows the idea of cross-programming. Source: Koolhaas 1994



Hybridization between infrastructure and architecture in Tokyo. Source: Kaijima (et al) 2001



Hybridization between residential, farming and local food distribution in Tokyo. Source: Kaijima (et al) 2001

Food and the city - Melbourne markets

The populations of Melbourne and Victoria have long been supplied of fresh fruits and vegetables from local market gardeners and fruit growers who have modest resources of soil and climate. Before the introduction of supermarket chains, people got most of their foods from the wholesale fruit and vegetable markets. There were four of such markets: the Western Market (1841), the Eastern Market (1847), the Queen Victoria Market (1878) and the Melbourne Wholesale Fruit and Vegetable Market (1969) ¹which continued as a wholesale market in 1979 and recently moved to Epping. The markets not only supply food but also the public spaces where people interact and connect to each other. They are full of activities and vibrant places. However, the four markets mentioned above were located in or around the city center and people from further towns need to travel quite a distance to get there. The foods from these wholesale markets were then redistributed to other local areas and foods become more accessible for people. Nowadays, people get most of their food from supermarket chains which exclude small retailers and reduce significantly our habit of buying food from the markets.

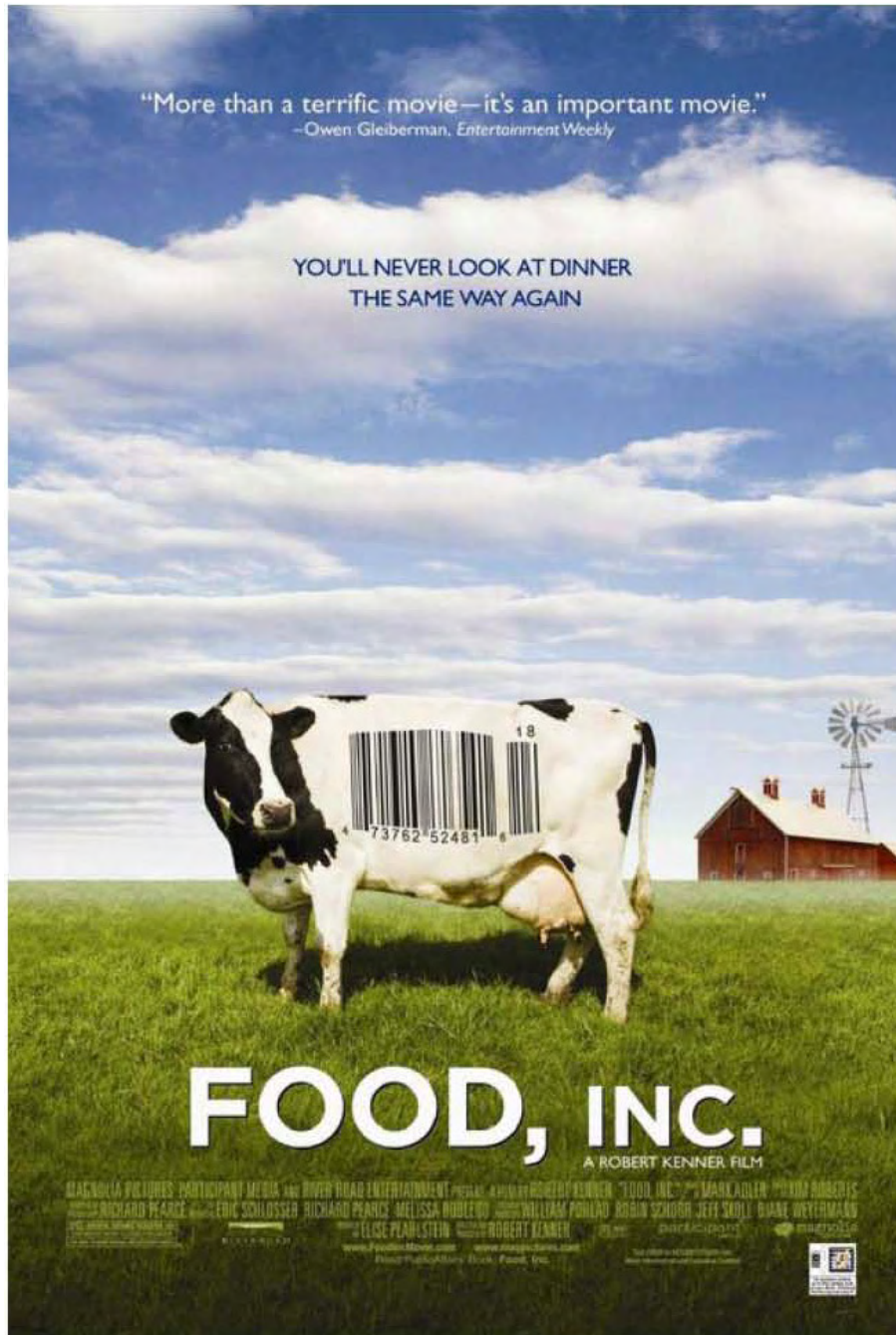
¹ Cole, C (ed.) 1980, Melbourne markets, 1841-1979: the story of the fruit and vegetable markets in the City of Melbourne, Melbourne Wholesale Fruit and Vegetable Market Trust, Melbourne, p.1.



The Queen Victoria Market in action, April 1878
Source: Cole(ed.) 1980



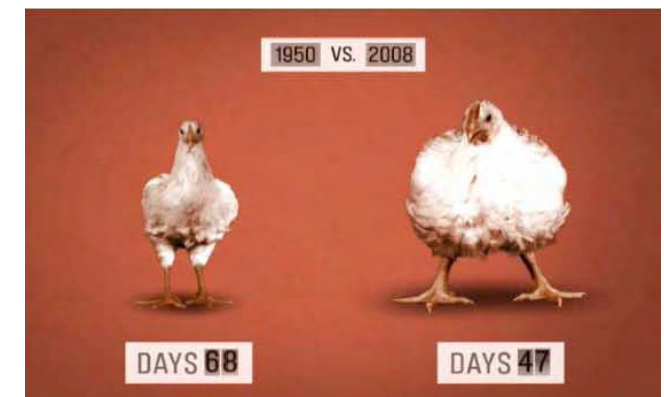
Growers queue up to deliver cabbages and cauliflowers to the Market Gardeners's Association in Flinder Street 1912 . Source: Cole(ed.) 1980



Cover image of Food, Inc. video recording

Food, Inc.

The movie Food Inc. is about how food is produced in America to supply supermarkets. It shows the reality of food production at an industrial scale. It details many examples of the abuse of workers and animals as well as food mass production. For example, it takes much less time to raise a chicken in 2008 (47 days) compared to 1950 (68 days) due to massive increases in hormones and additives. The movie promotes organic local growth food. The public need to be exposed to food production process and aware of their food consumption. The film also raises the awareness of the public about the importance of agriculture in their immediate living environment.



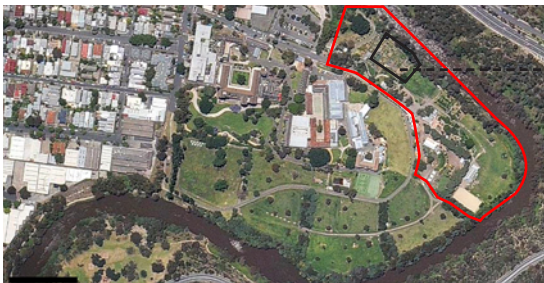
Extracted scene on chicken production comparison from Food, Inc. video recording

Urban community recreational farming: Collingwood Children's Farm

Established in 1979 and located next to a preserved convent only 5km from the centre of Melbourne, the Collingwood Children's Farm is a not-for-profit community venue providing country experiences for city people. The founding committee of the farm hoped that children living in an urban environment, often without backyards, would learn to care for animals and nature and also have fun outdoor activities. The Collingwood children's farm is a very interesting model of community farming. It is also a food production and distribution venue with demonstration and education of agricultural activities. It promotes philosophies of permaculture, landcare and organic farming. Its programs include orchards, vegetable farm, and animal farm; weekend farmers market, school programs, restaurant and café as well as individual lots of garden leased out for nearby local residents. It acts as a social and cultural hub that attracts surrounding populations to come, interact and sharing infrastructure and resources. It is an interesting precedent for my projects in Hanoi and Melbourne in finding ways to maintain agricultural production and get the community involved.



Activities in the Collingwood Children's Farm including farmer market, allotment gardening and animal breeding



Collingwood Children's Farm - aerial location



Allotment community garden in the Collingwood Children's Farm

4. MARYSVILLE - PERIPHERAL LIVING

4.1 Introduction

Background

“Peripheral Living” is a design studio investigating the peripheral area of Melbourne which was seriously affected by bushfire events in 2009. The periphery of Melbourne is the transitional area between the city and the countryside. People living in these zones are seeking a close-to-nature lifestyle but still rely in many ways on the urban infrastructure of the city. During the bushfire disaster in February 2009, the town of Marysville was almost destroyed. The rebuilding of the town should provide new and extra community services and public spaces which have the ability to enhance the everyday life of people and also respond to emergency events.

Site observation

The football oval is located near the town centre and close to the primary school and the Bruno’s sculpture garden which is devastated by the bushfire. There are two existing tennis courts and a football club house on the edge of the oval. The oval’s perimeter is surrounded by gum trees which were partly burnt by the fire but under the process of recovery. During the bushfire, many people escaped to the oval and stayed overnight there. There are lots of potentials to turn the oval into a more efficient public venue which provides public infrastructure for the town.

Research aims

1. Finding ways to create a safer living environment for people in bushfire areas
2. Investigating existing oval typology in peripheral towns and propose new typologies which are more efficient in responding to emergent events
3. Investigating the relationship between time, events and landscape as well as public space

Design Strategy

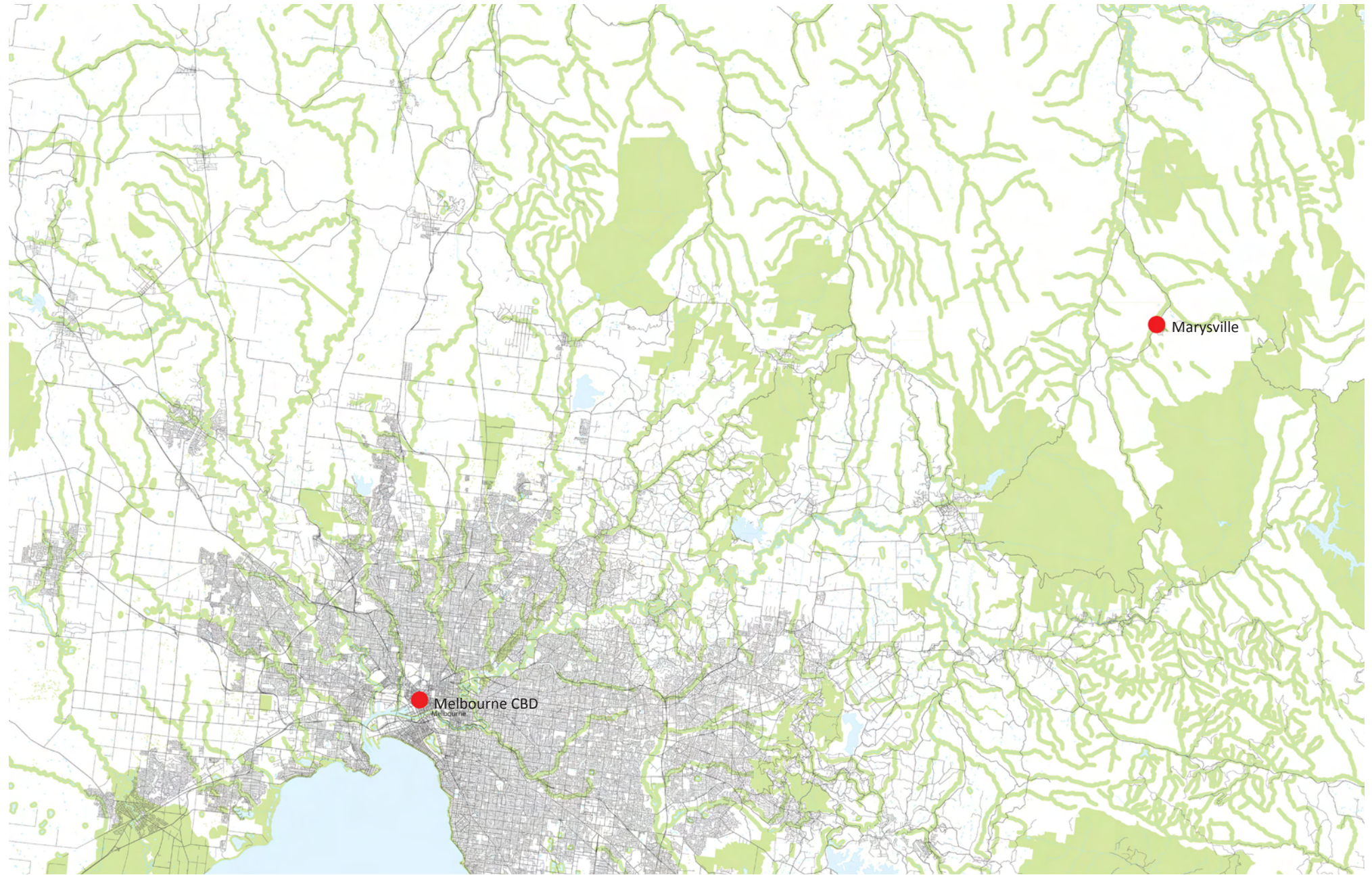
The project explores intensification and making more strategic the use of existing community facilities clustered around the football oval. The existing public space is augmented by a range of adaptable programmes and structures, enabling different events to take place during emergency, transitional and permanent phases of living. Most importantly, the oval becomes part of a network of support centers throughout the region. The project has formulated the strategies of time-phasing, edge intervention, hybridisation and network intervention.



Public facilities in the emergency centre, Marysville, 2009



Famous Bruno’s Sculpture Garden after bushfire, Marysville, 2009

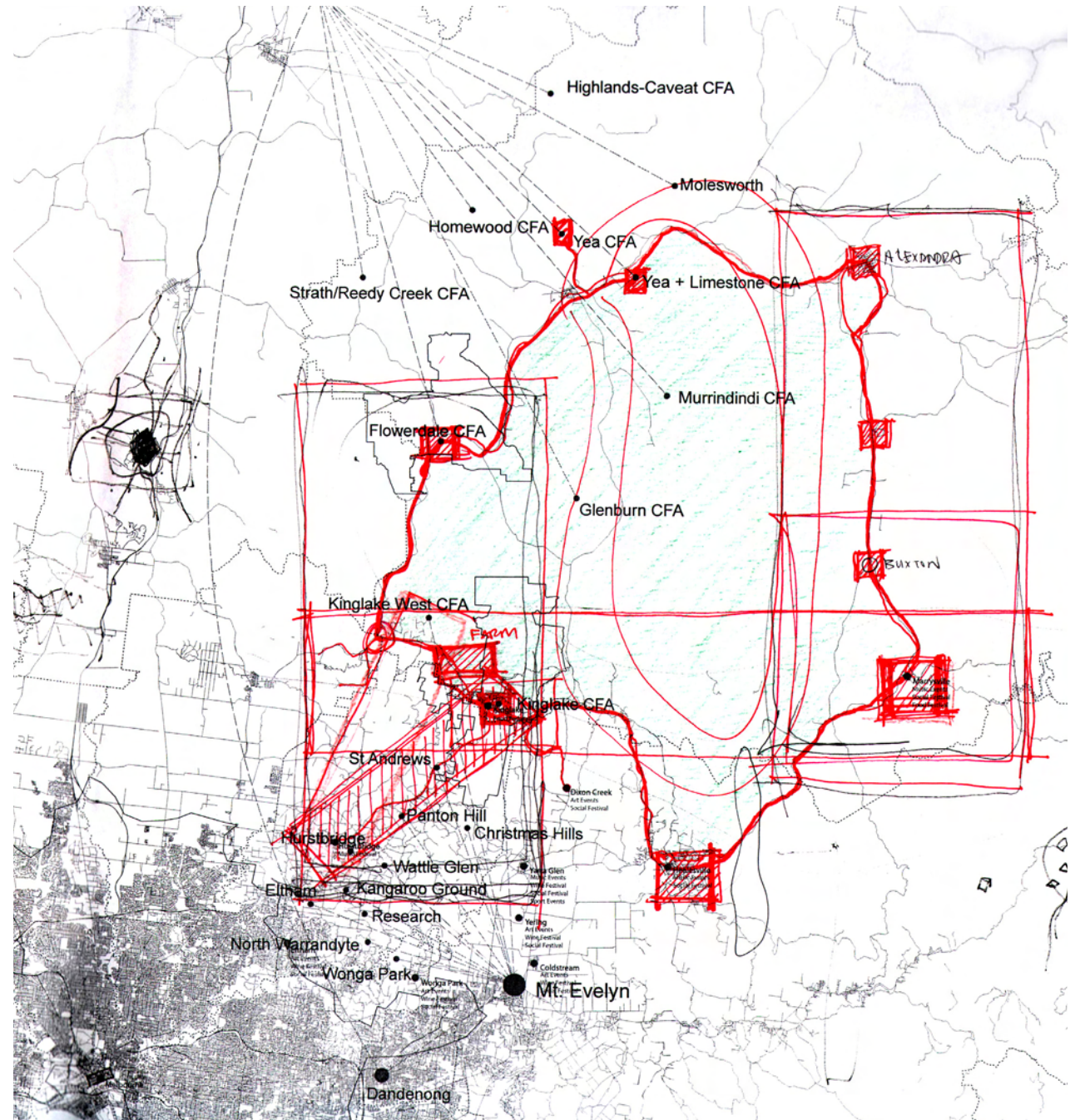


0 5 10 15 30km

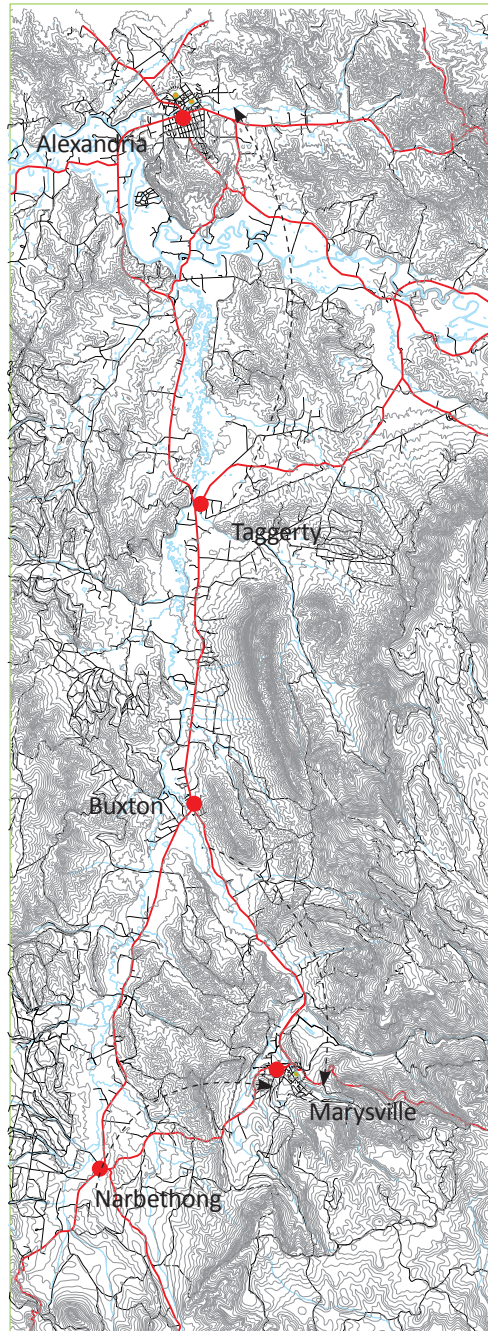
Marysville location map

4.2 Regional scale

The sketch shows the journey taken by the Peripheral Living studio to visit the peripheral North East of Melbourne which was heavily affected by bushfire in 2009. The network of towns triggered thoughts on how to act in a regional scale and create a series of gathering points which provide infrastructure supports in emergent events.



region of investigation in relation to Melbourne

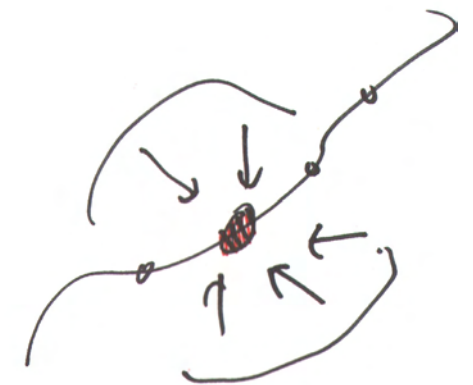


Network of ovals as a regional strategy

Regional scale

The combination of community services and sport venue in oval site creates a regional strategy which could respond to emergency, transitional and permanent events. The example of Marysville could be applied to other ovals. They foster the livability of peripheral Melbourne. In 2009 fires, the town of Alexandria, for example, was used as a base for firefighters. The pub and oval at Alexandria became part of a regional network in support of Marysville.¹

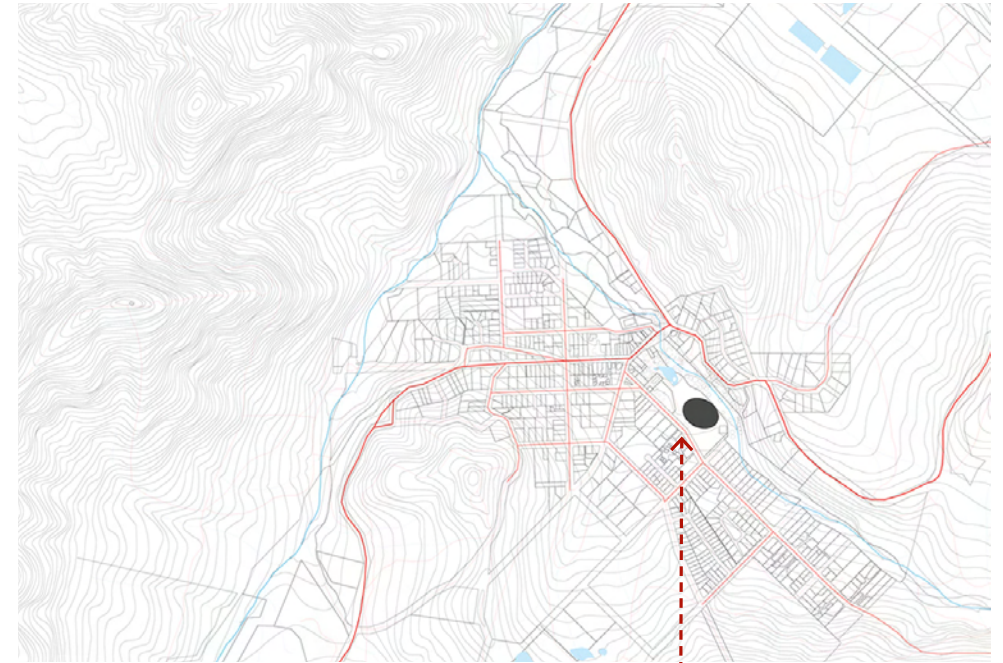
¹ Source: Conversation with local residents in Marysville, 2009



Towns with ovals becomes evacuation points for surrounding areas

4.3 Site context

The football oval is located near the town centre and close to the primary school and the Bruno's sculpture garden which is devastated by the bushfire. There are two existing tennis courts and a football club house on the edge of the oval. The oval's perimeter is surrounded by gum trees which were partly burnt by the fire. The police station, primary school, swimming pool are all destroyed and need to be rebuilt. The research proposal is to integrate the primary school and swimming pool into the new public facilities around the edge of the oval.

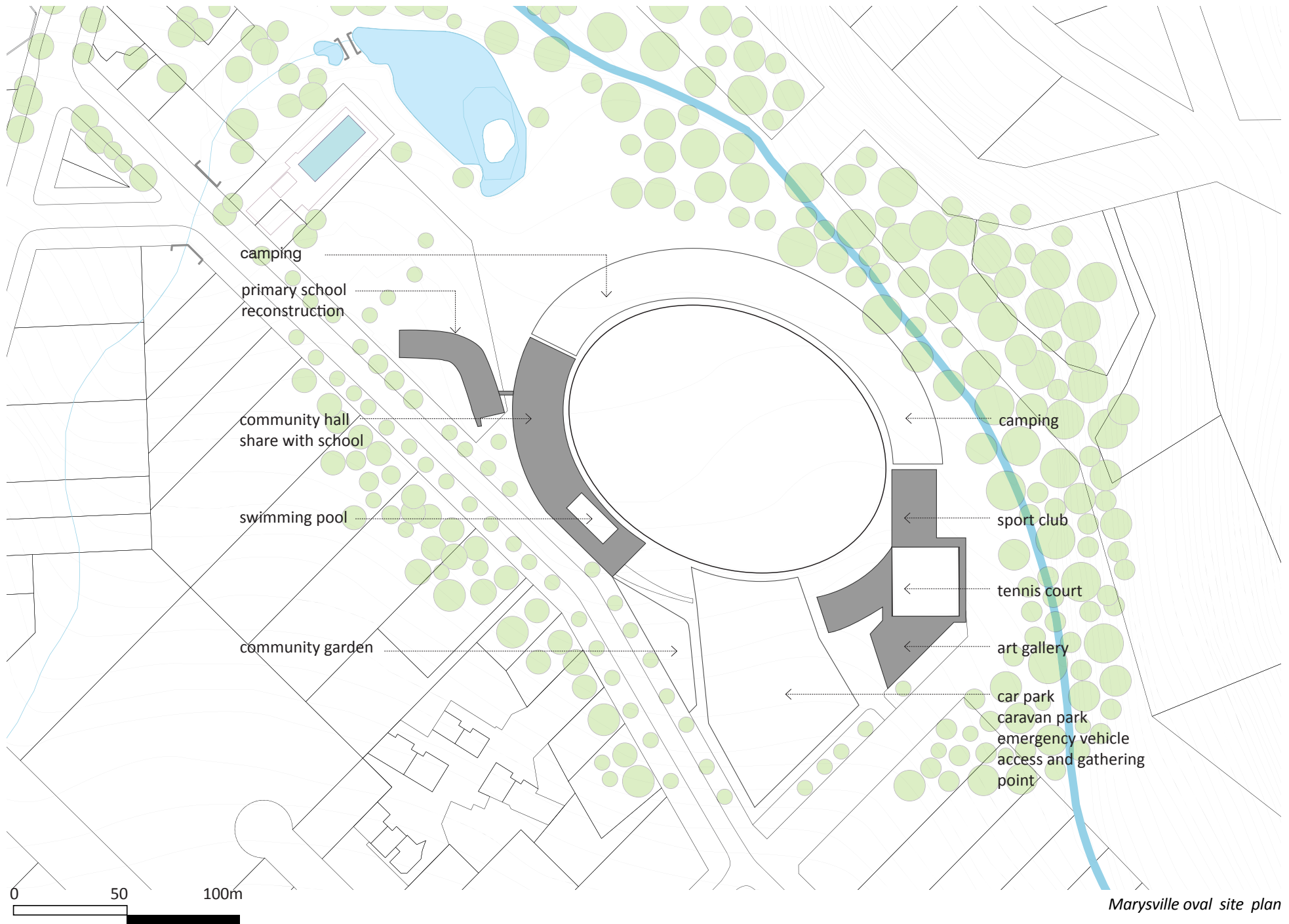


Oval's location map, Marysville



Aerial view of the football oval before the bushfire, Marysville





Marysville oval site plan

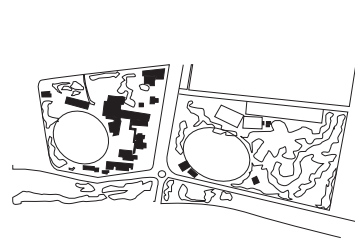
4.4 Football ovals in small towns - A case study

The starting point of football oval site in Marysville triggers a larger interest in other similar sites across peripheral zones in Melbourne.

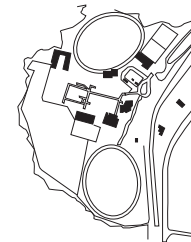
In the peripheral towns, the football ovals are important public venues where a lot of public events take place such as festivals, sport events, weddings, or local markets. The oval is surrounded by public buildings such as sport centers or schools. It is the actual public place for interaction for local suburban residents.

Therefore, by looking at the oval in Marysville and other similar sites, we can formulate a network of these sites which support not just sport events but a whole range of events and programs such as evacuation points, festivals, and public infrastructures.

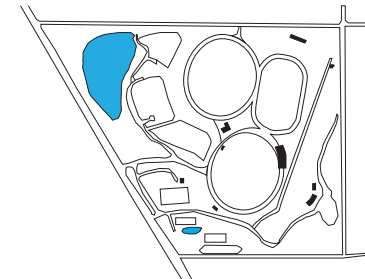
This network is particular effective in emergency cases like bushfire. These oval sites have the potential to be intensified and connected at a regional scale.



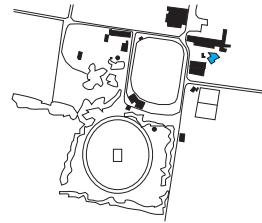
Bacchus Marsh



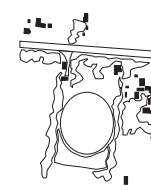
Hurstbridge



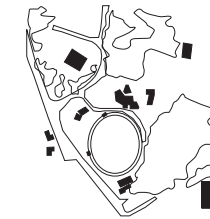
Healesville showground



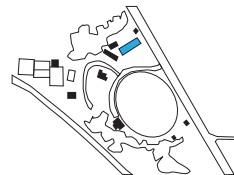
Kilmore



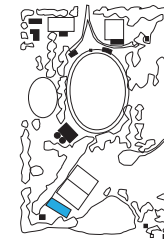
Kinglake West



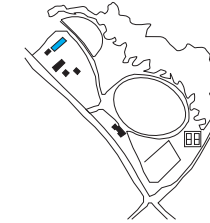
Kinglake Centre



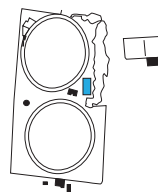
Healesville



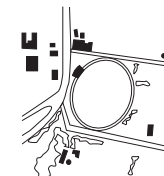
Lancefield



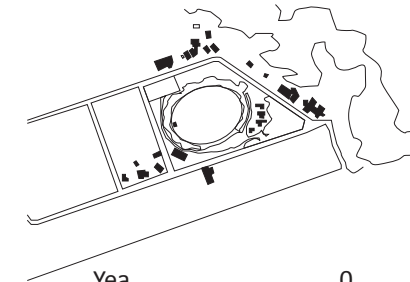
Marysville



Wallan



Woori Yallock



Yea

0 200 m

4.5 Study sketches

These study sketches are different ways to think about the question:

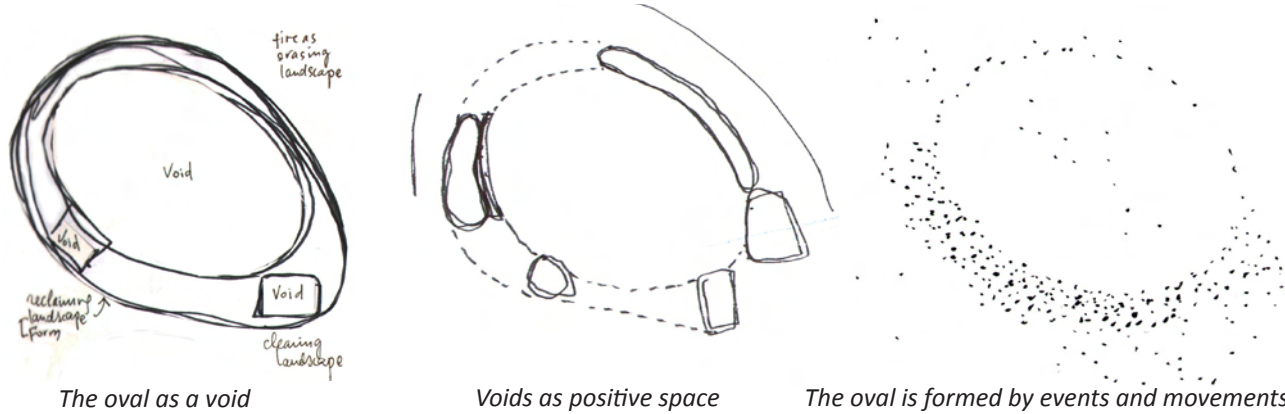
What is an oval and in what ways can we define it?

We can think of an oval as a void, or it can be defined by its edges which could be solid or simply defined by geometry.

We can think the oval is formed or constructed by events and movements?

We can think of it as a clearance or erasure of landscape?

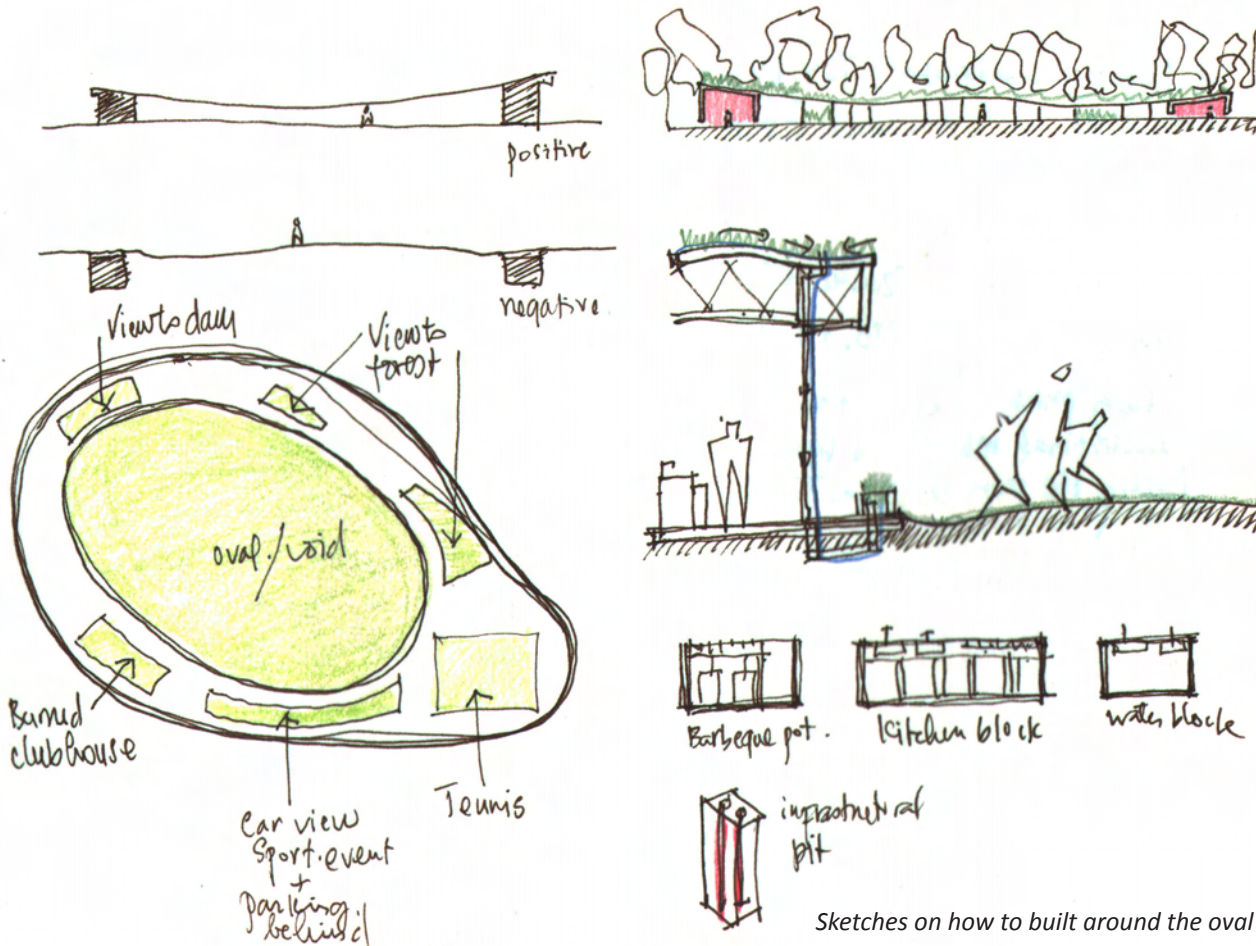
This brainstorming could help to look at the oval in many different angles. The built forms of architecture are challenged by the question of what happens inside or around an environment can actually define architecture. Does the oval provide an invisible architecture/system/organisation?



The oval as a void

voids as positive space

The oval is formed by events and movements



Sketches on how to built around the oval

Study sketches

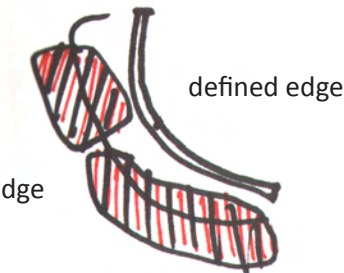
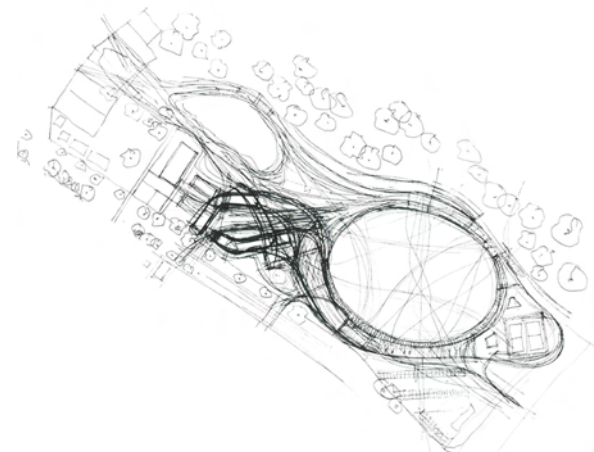
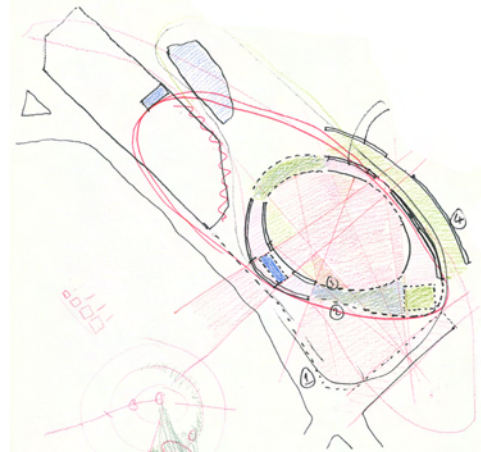
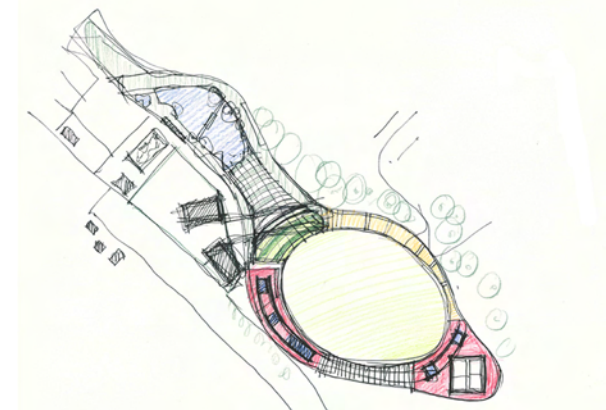
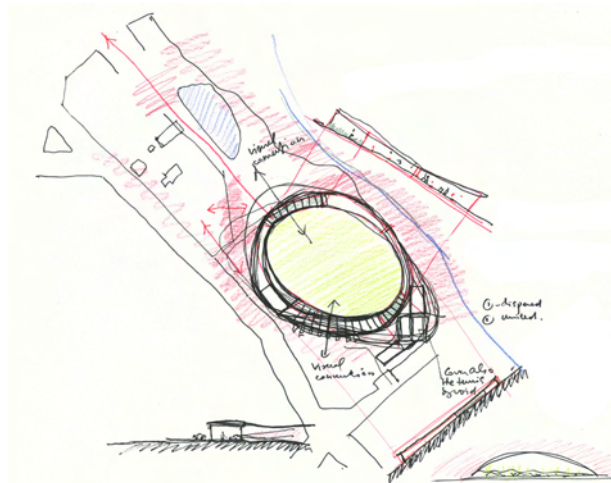
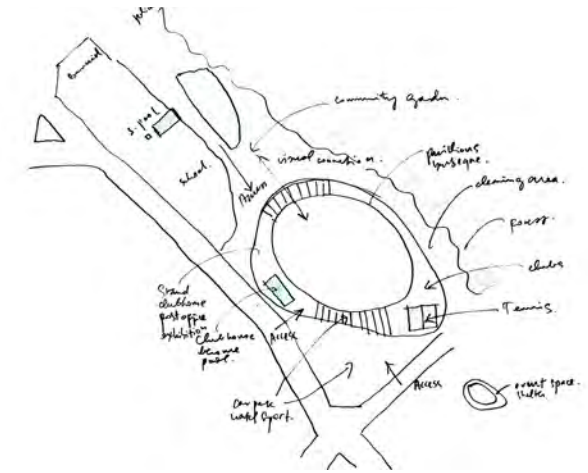
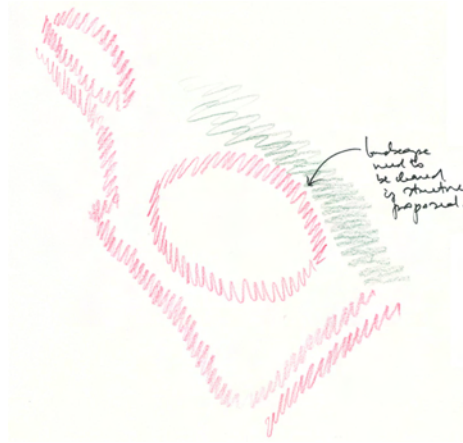
The edge condition of the oval.

What happens at the edge of the oval?

People stand on the edge of the oval to watch sport events. Drainage systems under the oval edge collect excess water from or around the oval. Fences are constructed around the edges.

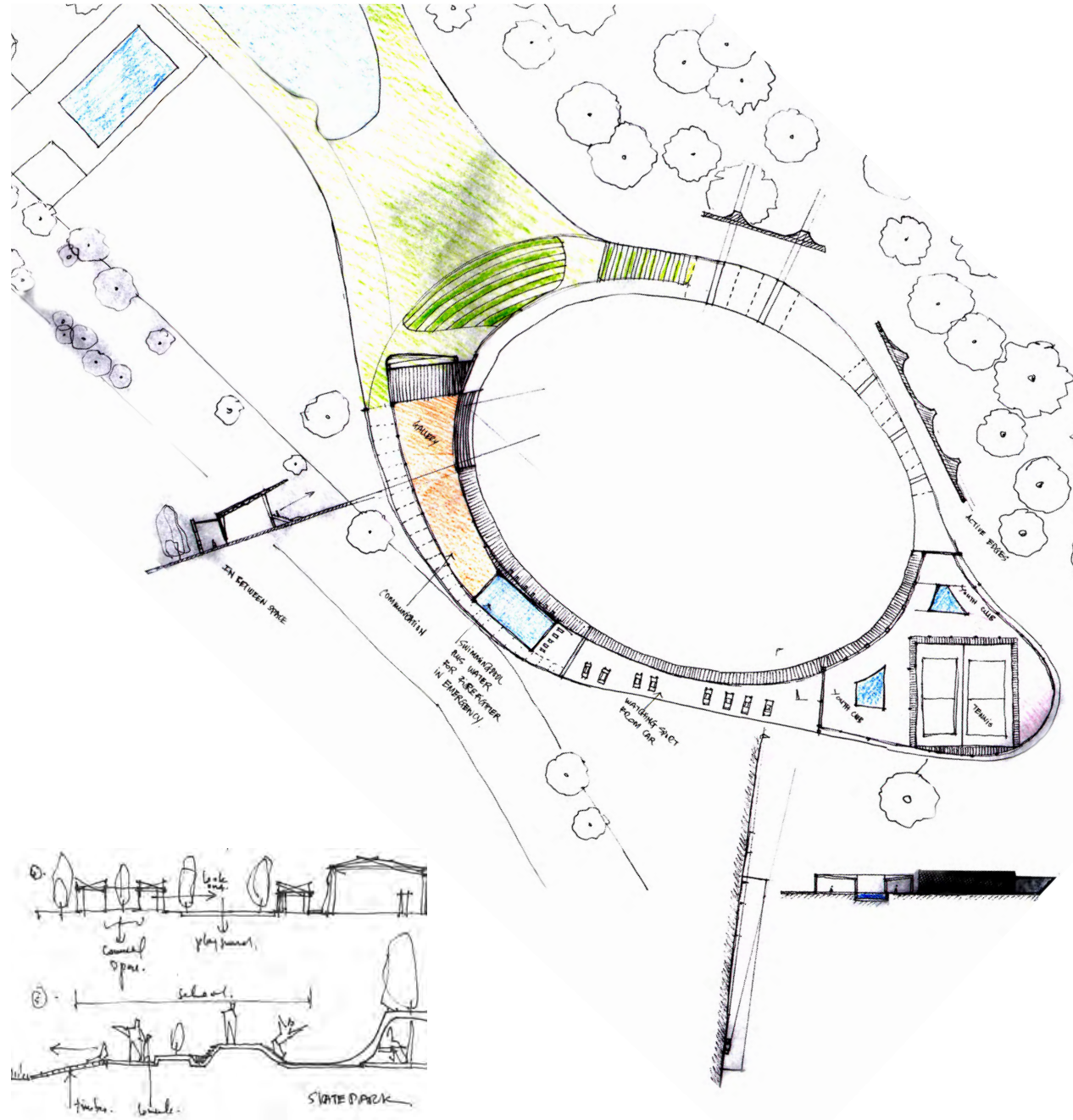
How to open up the edge allowing an interaction between the oval and community?

Part of the oval edge could be built to provide infrastructure for events and connect the oval with the town.

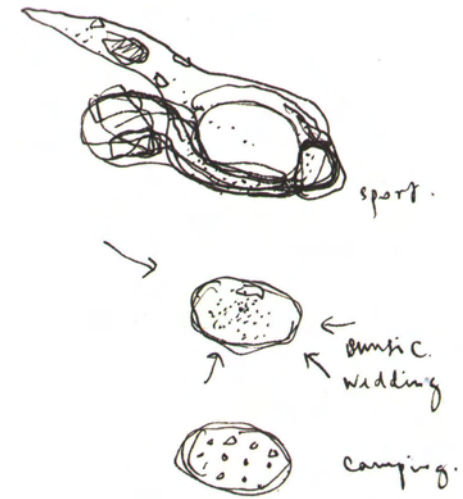


Design development drawings

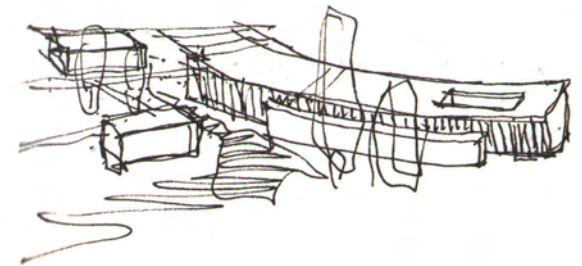
Plan and sections are used to identify different layers and conditions of the edges. This helps to formulate the architecture of the infrastructure which supports the oval's operation.



Sectional sketches of activities around the oval



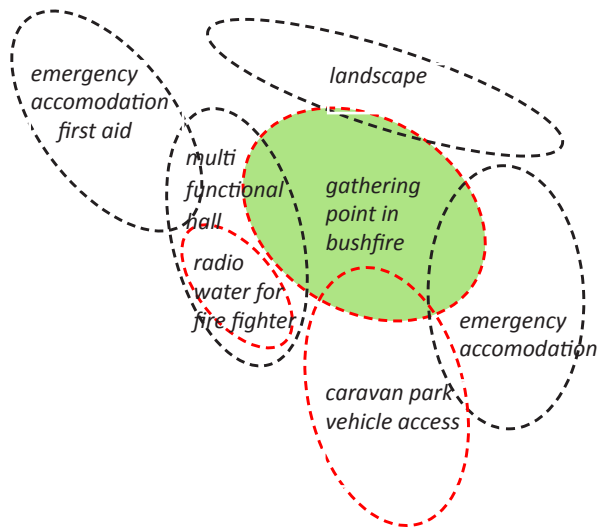
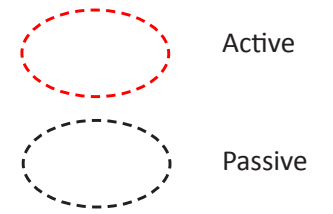
Sketches of possible activities inside the oval



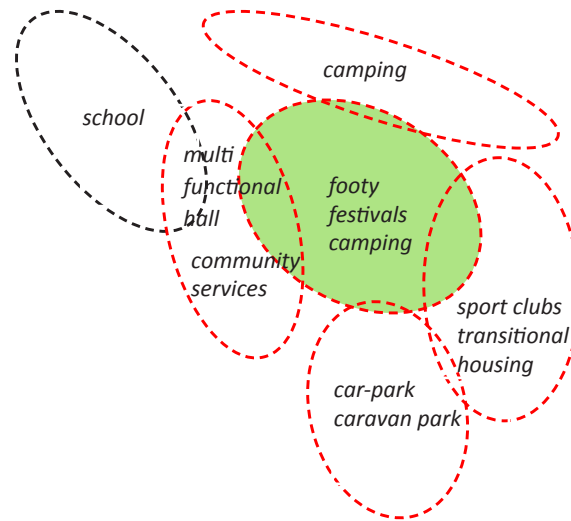
Sketches of the communal hall and swimming pool

4.6 Program scenarios

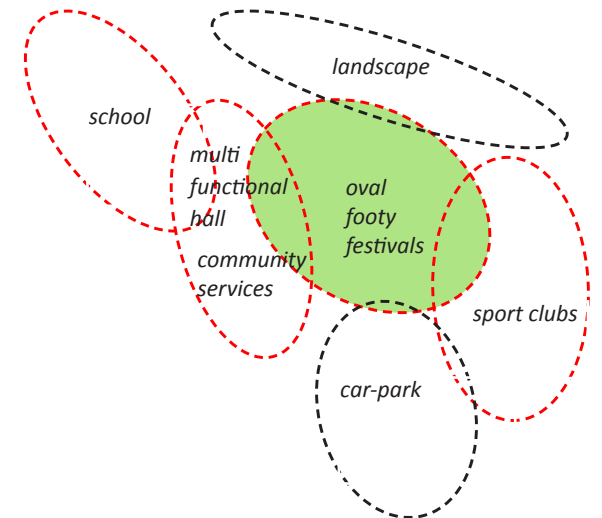
The three diagrams show active and passive areas of the football oval in emergency, transitional and permanent phases. The oval and its public infrastructure becomes the stage or background for events to happen or supporting public activities. By speculating on possible events, the built forms could be optimized.



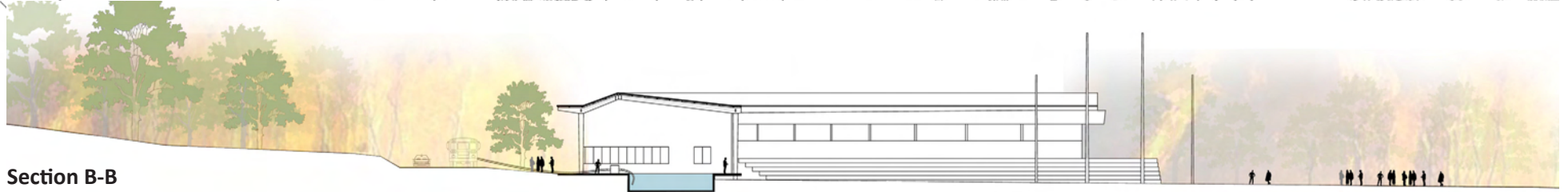
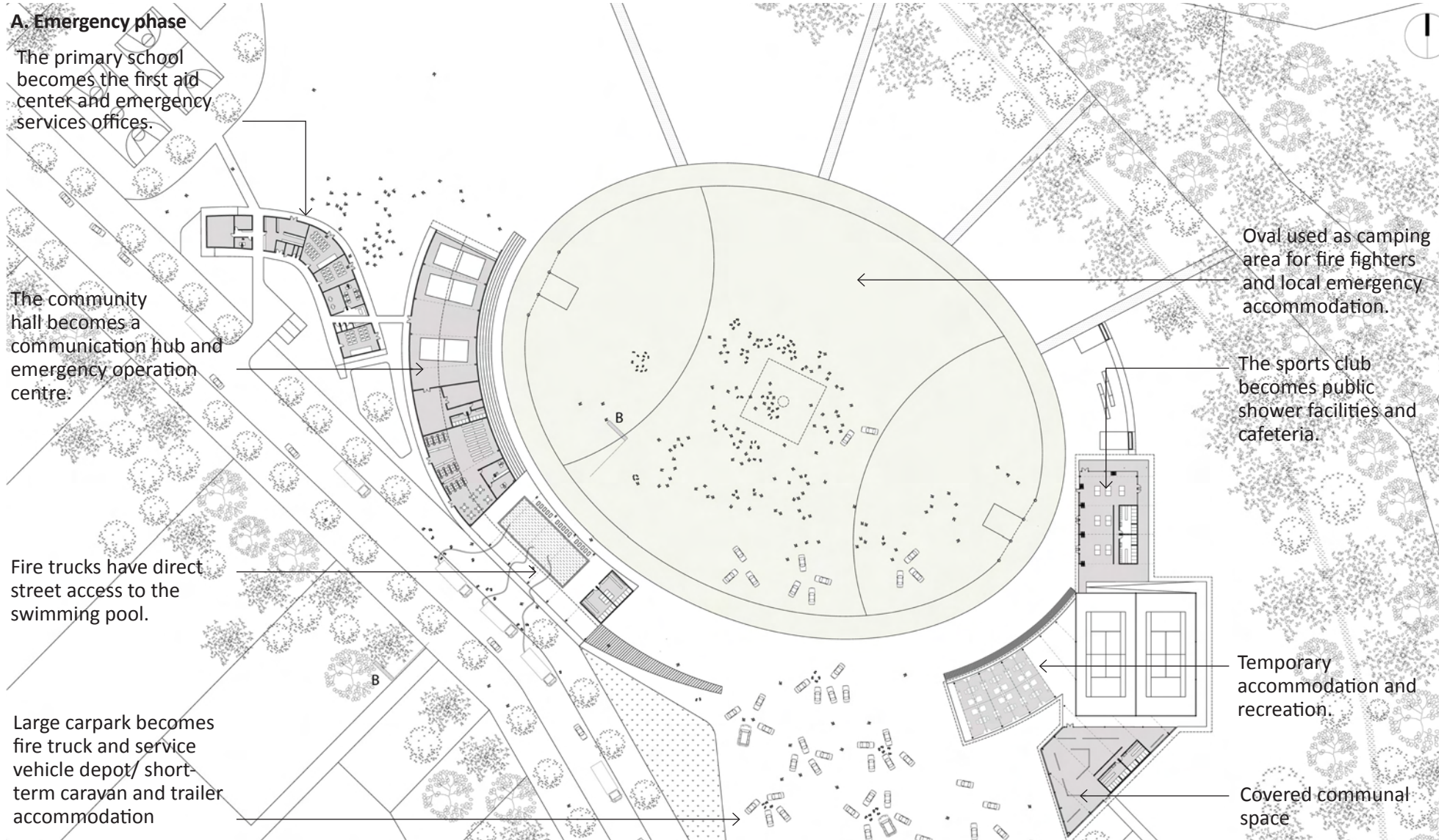
A. Emergency



B. Transitional

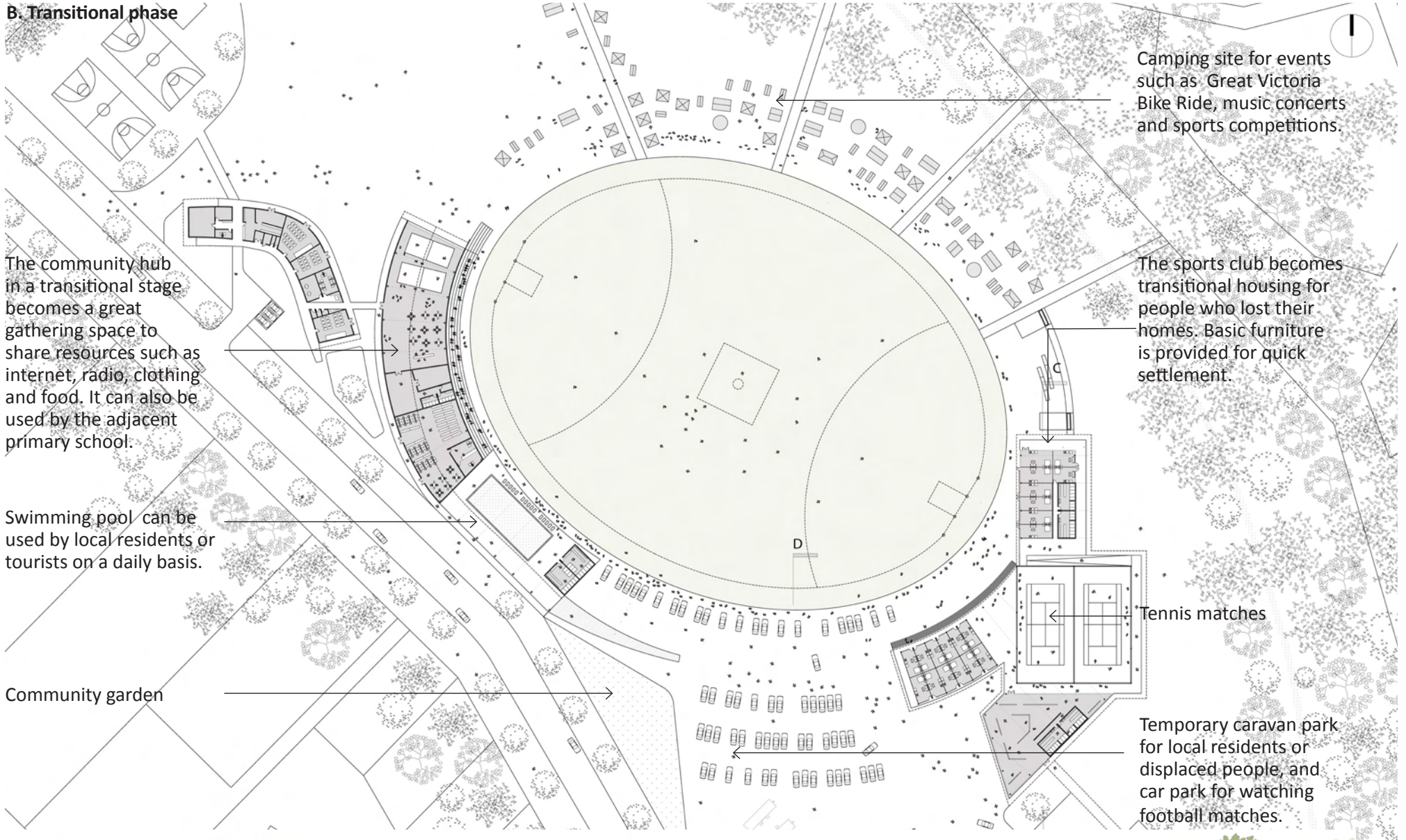


C. Permanence



Section B-B

B. Transitional phase



The community hub in a transitional stage becomes a great gathering space to share resources such as internet, radio, clothing and food. It can also be used by the adjacent primary school.

Swimming pool can be used by local residents or tourists on a daily basis.

Community garden

Camping site for events such as Great Victoria Bike Ride, music concerts and sports competitions.

The sports club becomes transitional housing for people who lost their homes. Basic furniture is provided for quick settlement.

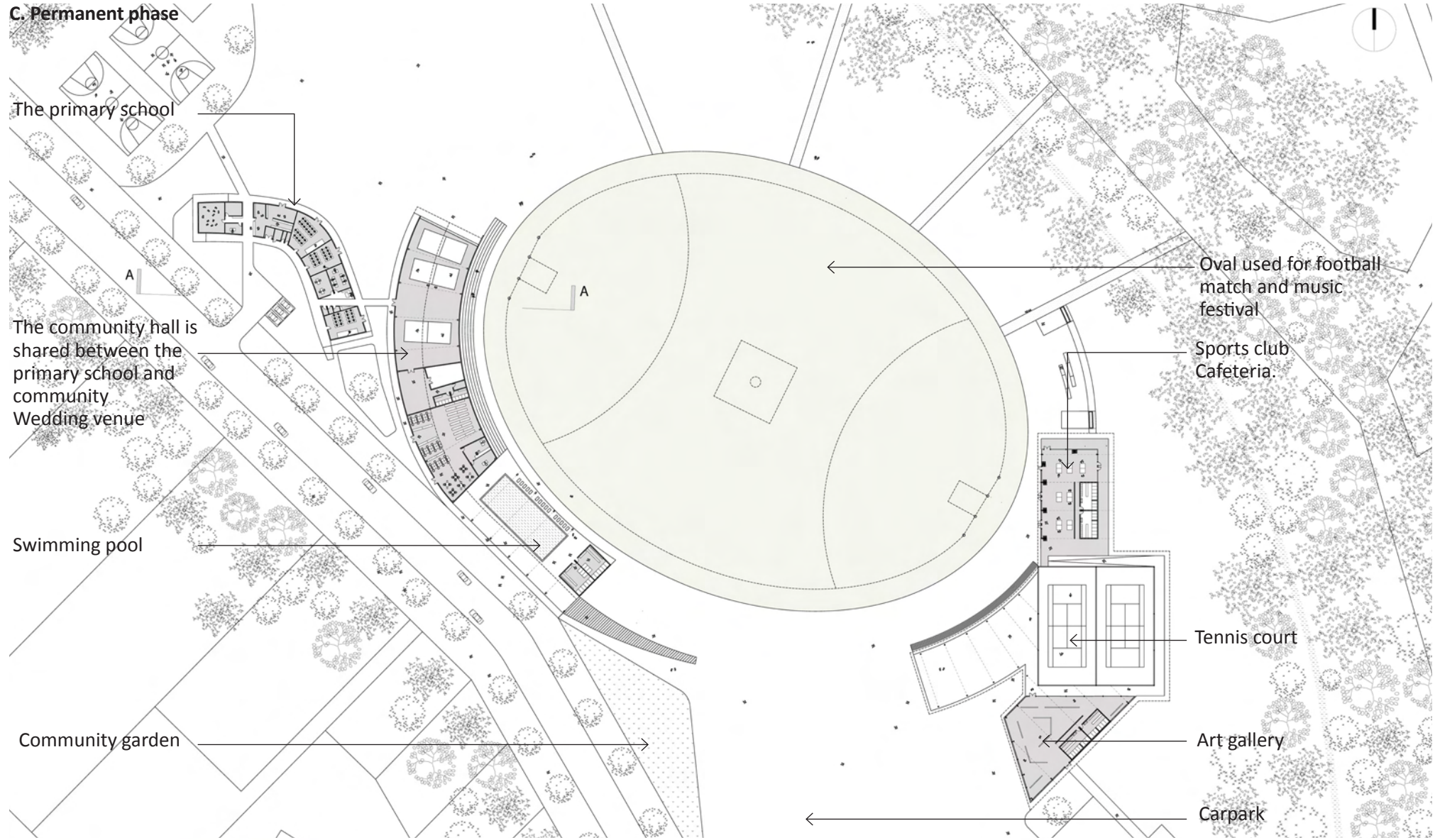
Tennis matches

Temporary caravan park for local residents or displaced people, and car park for watching football matches.



Section C - C

C. Permanent phase



Section A-A

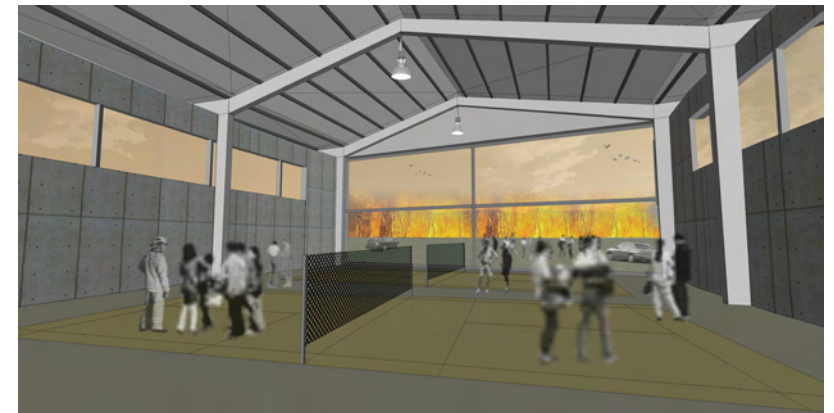


The communal hall is in permanent mode with daily sport activities. The hall is shared between the primary school and the people in town. The open nature of the space allows flexibility and changes over time.



Permanence phase

The communal hall becomes the gathering point in emergency events such as bushfire. The public facilities including radio station and water infrastructure nearby can be accessed to support the firefighters and the public.



Emergency phase

The communal hall becomes community support venue in transitional period after bushfire event. It provides food, resources and information for people in need.



Transitional phase

4.7 Reflection

In the first project, I explored time and events in landscape as themes to respond to the effects of bushfire upon peripheral habitation in Melbourne. The project intensifies strategically the use of existing community facilities around football ovals in small towns and considers these as a network of support centers throughout the region. The existing public space is amplified by a range of flexible programs and structures, enabling different events to take place during emergency, transitional and permanent phases. By looking at one space in three different time modes, I am interested in drawing out the potential and progressive transformation of the void and its edges which are explored in terms of programs, access and materiality. This is an important part of the project that needs to be developed in the next project. The transformation of programs in and around the oval shows spatial investigation of the research. The edge intervention and intensification create the interactions between programs where one program influences the other. These design strategies need to be explored further in the second project.



Multi-functional public spaces around the edges of the oval