MILOU VAN DER LINDEN

IDENTITY IN DENSITY
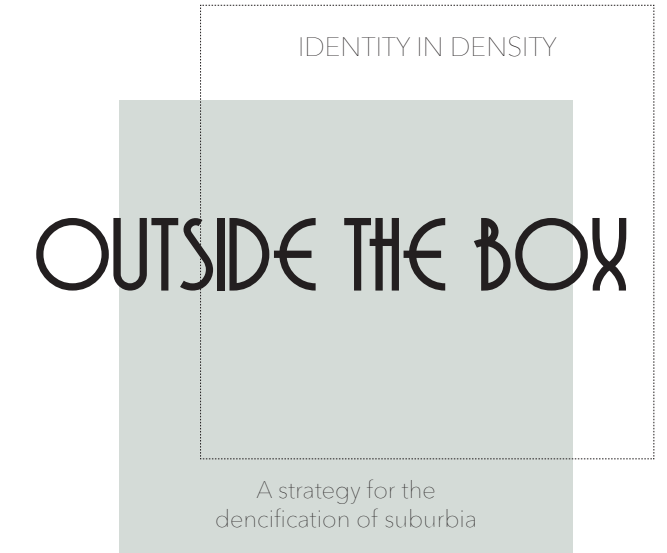
OUTSIDE THE BOX

A strategy for the
dencification of suburbia

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MSC GRADUATION PROJECT

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Master of Architecture, Urbanism & Building Sciences
TUDelft
Graduation Studio   Interiors building cities; Independent group
                     (AR3AI045)

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Acknowledgment

This project came together as a fascination and a research in the field of suburbia. One and a half year ago, I went for the exchange program of TU Delft to the RMIT University in Melbourne, Australia. This six months of living abroad open my eyes towards a completely different urban fabric than I was used to. The difference between living in the city and living in the countryside is what made this graduation project what it is.

The research on which these books are based is the work of many, and I am grateful to those who have guided, helped, and encouraged me in so many ways.

The seeds for this research and graduation project as a whole is collected in five booklets found in Book 1; Terms, Book 2; Place, Book 3; Archive, Book4; Project and Book 0; The Manual. Throughout these books the origin of the project has been captured.

For the fieldwork in the books, I am indebted to many people. First and foremost, I would like to acknowledge the supervisios Mark Pimlott, Leeke Reinders and Daniel Rosbottom. I would like to thanks them all inculding the external tutor Huib Plomp for their input and the many tips I received during the entire twelve months process. Further guidance was provided by the building technology professor Gilbert Koskamp , I would also like to thank him for the support during our guidance. In this graduation period I formed a graduation studio together with my fellow students. I would like to thank them for their critical eye and feedback.

I hope you enjoy reading this academic project.

FASCINATION

Arriving at Melbourne airport taking the bus to the city centre is where the differences already became clear. Driving from a low volumes single housing structure into a high rise apartment building environment with a lowly transformation in the inner suburbs that are already a bit more densified that the middle and outer suburbs.

Finding a place to live and the way to university where the most important things during my first days. Researching the housing market made me realise that life in the city for a affordable price is about sharing, from you living room, kitchen and bathroom till you bedroom with at least one other person. A culture where a lot of Asian people are familiar with. Beside the Asians, another group that could be found living in the city centre is us. European who are settling there for a decent amount of time to study or work in Melbourne. Most of them are staying in hostels or apartment building a bit further out of the city as there work can be everywhere. Me as an exchange student who can no afford living in a student residential building or a room in the suburbs is required to mix with the culture of the Asian population. That is what I experienced, Melbourne city centre, a place of coming and going, a place with a changing society and a place where Asians feel like home. An environment where people are communicating in their own language and changed the city in their own environment. I felt like a stranger in the so told western culture of Australia.

Where are the Australians? That was what I was thinking. If they are not in the city while they are studying, where are they then living? As soon as I started studying I found out that they weren't living in the city centre where they are studying like we a doing in the Netherlands most of the time. No, they were still living with their parents in the countryside where they have grown up. The countryside, a side

of independence, freedom and memories. A place where they have their memories, friends and family close by. They are coming to university by car only when necessary and leaving straight home after class back to their little city with their own environment.

This contradistinction between living in the city centre and living in the suburbs admired me and I took a step further in the understanding of this cultural differences. Every year, Mpavilion is organising a platform for debate and this year it was on housing, the culture of living closer together. Exactly the topic that rises my interest. I went to a couple of their debates and I discovered that there is a problem around this big differences in living closer together. From there I start to realise that this could be an interesting graduation topic.

TERMS

*(t3rmz)***Pl. n.** a word or phrase used to describe a thing or to express a concept, especially in a particular kind of language or branch of study.

IDENTITY IN DENSITY - OUTSIDE THE BOX
A strategy for the dencification of suburbia

PREFACE

The book in front of you is a collection of terms. According to the standard dictionary definition, Terms is "a word or phrase used to describe a thing or to express a concept, especially in a particular kind of language or branch of study." To define the terms who are significant to express my concept in this particular study of architecture, I need to focus on some specific background and historical information about Melbourne. As the city and the suburbs are important terms to define, the development of both these terms will be studied. The outcome of this research will result in specific definition turning in a couple of other terms who will be described and defined later on. In the end, architecture refers to a physical enclosure that protects and supports human life and activities, its definition can thus encompass an assemblage of buildings. Buildings that could be a house.

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INTRODUCTION

The forecast is that the population is growing whereby progressively cities are becoming more dense than ever. More and more people are living in cities with suburbs conceived as appendages, rather than being part of the city (van Schaik, 2018). The connection Australians have to the suburbs goes back to history and is deep rooted in the Australian culture. That is not only because all the Australians have grown up in suburbs, but the idea of the suburb as politically organised space lies at the base of Australia's early urbanisation. How to deal with the confrontation between the forecast of a rapidly growing population and the deep historical connection Australians have with the cultural identity of the suburbs in Melbourne?

The development of suburbs came from the fact that families no longer wanted to live in the city, close to traffic and industries. The dream of having your own house in the country made how it is today. Australia's population will grow from 22 to 36 million by 2050, which means that 6.5 million new housing units will be required in the next 35 years (Nightingale housing LDT, 2019). According to the statistic of the LSE Cities' Urban Age programme, the world is heading towards 70% urbanisation by 2050 lie regional differences in demographic, economic and environmental change as well as for Melbourne. Consequently, not only Melbourne city centre is becoming more and more dense than ever but suburbs also need to density. The way Australians look to density is still an important issue in strategic land use planning in Australia (Boxton, 2007), because of the deep historical connection to suburbia. According to the forecasted grow, the way Australians look to density has to change.

Densification is not the only problem that Melbourne is facing. As stated, suburbs conceived as appendages to the city as a result of a lack of services and facilities. Cars are necessary and everyone has to travel an enormous distance to go to work. Therefore, the people who cannot afford this way of living is in trouble. Due to the fact that renting in the city centre is too expensive and it is increasingly difficult for many to achieve the "great Australian Dream". Melbourne has been termed the fifth most unaffordable housing market in the world: the median house price hovers somewhere between $800-900.000, 9.9 times the median income. At the same time, 24.000 Victorians are homeless, and almost 400 people sleep rough every night, almost half of whom are in the public housing waiting list, which stretches for years (assemble paper Perkovic, 2018). The aim is to solve the gap between living in the city and living in the suburbs by creating a balance that makes living in suburbia more sustainable. Sustainable in the sense that it is contributing to the needs of the population for today, tomorrow and over years.

PURPOSE

The main focus of this project is to find out what the role of suburbia is - still where most Australians live and want to live - has to play in meeting the needs of a densifying population. The book collection in front of you is a searched to define the qualities of suburbs, by unlocking the design potentials hidden in the physical structures of the city and suburbia. Qualities both hindered and enabled by the usual plot subdivisions. The goal is to design a new typology for suburbia suited for the low and median income population by making a responsive design on accessibility, affordability and density level. This new typology of dwelling and collective functions will form the glue within the wider urban structure and solve the gap between living in the city and living in suburbia. In essence, it is about the making of a middle landscape. A new typology of affordability and housing will be research and introduced.

METHOD

Starting with an analysis of the city, what it is, what it tried to be and what we want it to do, a definition of a city can be formed. Bisde the city, the urban sprawl, sububia, is also going to play an important roll. If we know what the city and suburbia means for the population nowadays we can start thinking about designs. Beside the research to the meaning of the city, it is important to know in what kind of condition you are going to work in. By looking into the history of Melbourne the condition will become understandable.

Theoretical framework (cambridge dictionaries)

Definition 'city'

City' *(noun)* a large town
City' *(noun)* a place where many people live, with many houses, stores, businesses, and which is bigger than a town

To define the qualities of the city we have to understand the common definition of it. The city in this case is the centre of Melbourne layout in the hoddle grid together with 12 inner-suburbs; Carlton, North Carlton, Flemington, Kensington, Dockland, Southbank, South Yarra, North Melbourne, East Melbourne, Parkville, Port Melbourne and South Wharf.

Definition 'suburb'

Suburbia' *(noun)* the suburbs of a city, or suburbs in general
Suburbia' *(noun)* the outer parts of a town, where there are houses, but no large shops, places of work, or places of entertainment
Suburb' *(noun)* an area on the edge of a large town or city where people who work in the town or city often live

Suburbs are an important part of Australian cities. Suburbs are attached to the city centre, with there own alternative ideology and opportunities. So we cannot talk about Melbourne by leaving suburbia behind. Suburbs are often seen as little town on their own, depending on the car and without facilities and services. It is significant for this research to get a deep knowledge of the history of suburbia to contribute to it in a later stadium.

Definition 'density'

Density' *(mass noun)* the degree of compactness of a substance
Density' *(count noun)* the quantity of people or things in a given area or space
Density' *(noun)* the number of people or things in a place when compared with the size of the place

The project needs to be the result of a doubling of the population from Melbourne. This densification is required to support the outcome supporting this grow. Suburbs are not yet comfortable with this term, therefore it is important to define density in a way Australians feel familiar with. Density will be approach in dwelling per hectare.

Definition 'accessibility'

Accessibility' *(noun)* the fact of being able to be reached or obtained easily
Accessibility' *(noun)* the ability to reach or enter a place or building

Services and facilities are rare in suburbia. The accessibility to this elements is the key issue in urban development. Accessibility in the way of the access to local shop and public transport in walking or cycling distance from your home.

Definition 'affordability'

Affordability' *(noun)* the state of being cheap enough for people to be able to buy

The result has to contribute to the unaffordable housing market in Melbourne. To clarify affordability, different model of home ownership will be analysed. When is something affordable? For who is it affordable? How to remain it affordable? All questions that have to be answered before a design can be evolved.

Definition 'housing'

Building' *(noun)* a structure with walls and a roof, such as a house or factory
House' *(noun)* buildings for people to live in

This research focused on housing. Especially about housing in the suburbs, because the existence of these areas is arrived from special expanded who can be seen in different part of the world and the housing crisis where the world is dealing with at the moment.
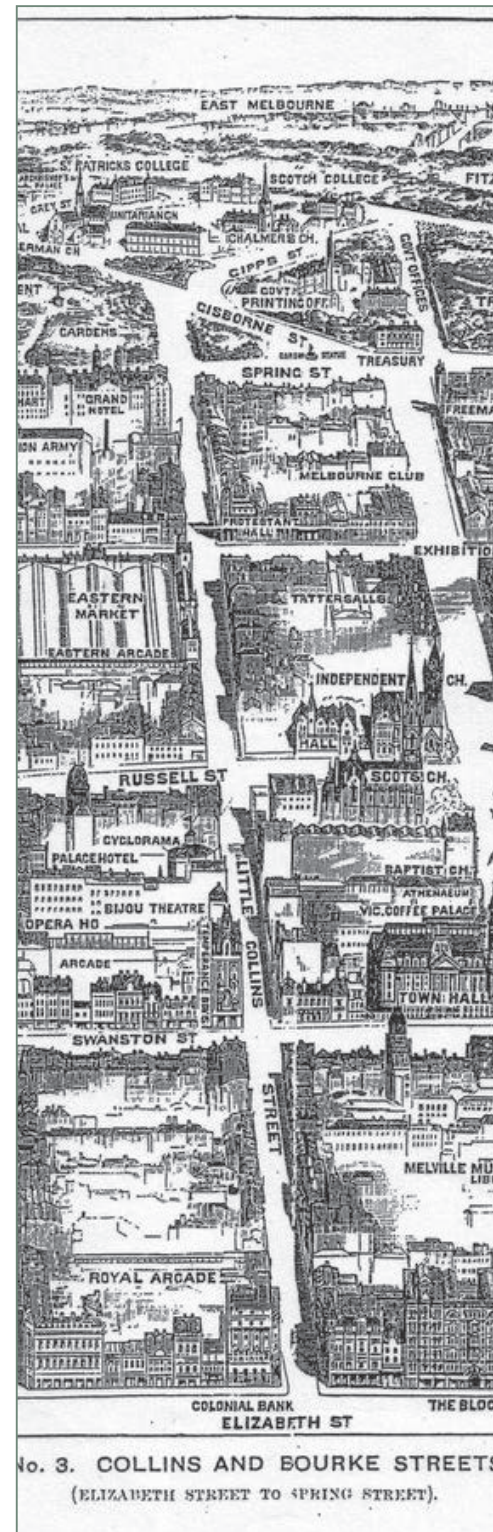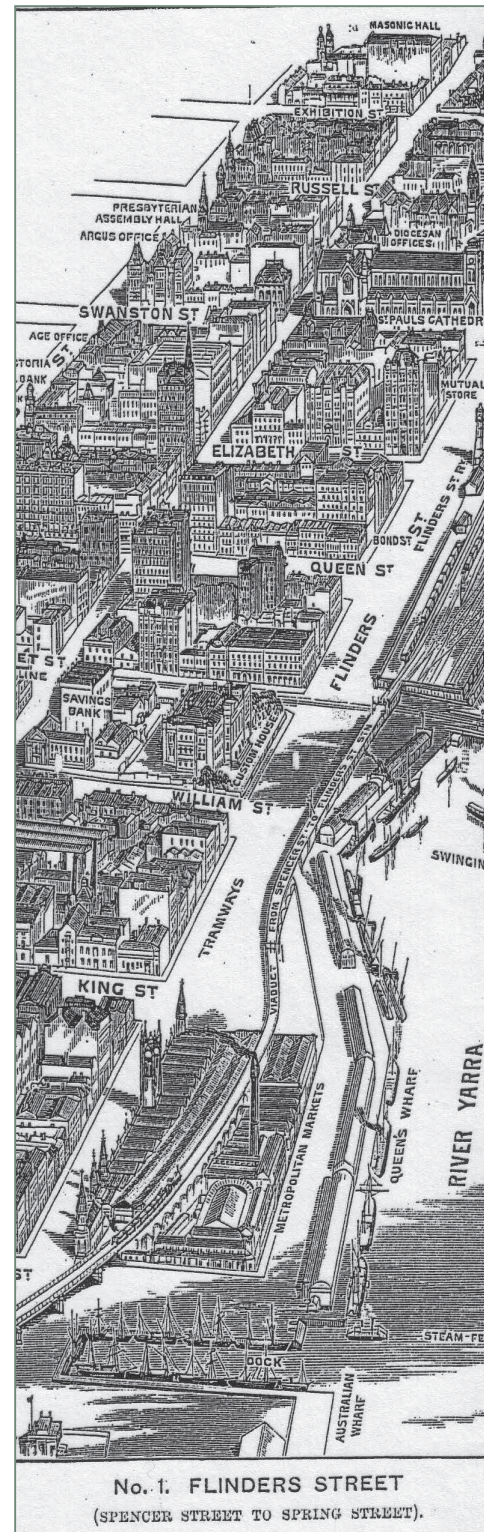
Established: 1835
31Municipalities

Melbourne City Centre: 36 km2
13 suburbs

Population: 135,959

The other 9956.5km2 of Melbourne is the sprawl of the city, the suburbs. Home for a total of over the 4.5 million people.

No. 1. FLINDERS STREET
(SPENCER STREET TO SPRING STREET).

No. 3. COLLINS AND BOURKE STREETS
(ELIZABETH STREET TO SPRING STREET).

The spacial identity of Melbourne

The city of Melbourne respectfully acknowledges that it is located on the traditional land of the Kulin Nation. Kulin Nation is an alliance of people from several language groups of Indigenous Australians, who had lived in the area next to the Yarra river for an estimated 31.000 to 40.000 years. The area, on the North side of the Yarra close where the freshwater met the salt water, was an important meeting place for several neighbouring tribes, as well as a vital source of food and water. This period is recognised as the pre-European settlement, because after the arrival of the Europeans the Kulin Nation disappeared.

DEMOGRAPHICS
Melbourne, Victoria, Australia

POPULATION
4,850,740

DENSITY
500/KM2

ESTABLISHED
30 August 1835

AREA
9,992.5 KM2

Melbourne is Australian's second largest city, consisting of 31 municipalities and the capital city of Victoria. The city occupies much of the coastline of Port Phillip bay and spreads into the hinterlands towards the Dandenong and Macedon ranges, Mornington Peninsula and Yarra Valley. Melbourne City Centre also known as "The CBD", a collaboration of 13 suburbs, serving as the local government area of 36 square kilometres and has a population of 135,959 inhabitants. The other 9956.5 square kilometres of Melbourne are the suburbs spread more than 40 km to the south, 30 km to the east, 20km to the north and sprawl across vast, flat basalt plains to the west. Also called the middle and outer suburbs due to the low dense development.

CITY' (NOUN) A LARGE TOWN

Melbourne was a meeting place for several neighbouring tribes. The first arrivals settled on the North side of the Yarra. The traditional life of aboriginal people in Melbourne was to change irrevocably with the arrival of Europeans. In 1837 Robert Hoddle's, a surveyor and artist from England made a plan for Melbourne city centre and in 1847 Melbourne was so fare that it officially raised from a town to the status of city. The Hoddle Grid is the layout of the streets in the centre of the original Melbourne City Centre. All major streets are one and half chains (99 ft or 30 m) in width, while all blocks are exactly 10 chains square (10 acres, 201 m × 201 m). It is one mile (1.6 km) long by half a mile wide (0.80 km). The grid system gave the city functional efficiency and was ideal for the equal distribution of land or easy parceling and selling of real estate (article). During this time, many aboriginal people had been moved from the town center near the Yarra to a reserve at Yarra Bend on the Merri creek. Others continued to occupy their traditional country in and around Melbourne and later North-Melbourne was re-called the presence of aborigines.

The discovery of gold led to a huge influx of people to Melbourne. This new population boost of Europeans of various backgrounds and large numbers of Chinese, mostly temporary, happened in 1850 with made a population of 100.000 people. Wealthy new suburbs like South Yarra, Toorak, Kew and Malvern grew up, while the working classes settled in Richmond, Collingwood and Fitzroy.

The state introduced 'Melbourne Building Act', an organisation that defined types of structures that could be erected. Surrounding areas around the city, planned later, developed a distinctive suburban or industrial character of their own. East-Melbourne in 1870 was planned, specifically as a middle-class suburb with better quality housing. Carlton, improved the quality of construction and Kensington became a free standing residential area. Further extensive development of central Melbourne took place after 1880. With a decline in the residential population of the central city in 1890 as people moved out to the newly developed suburbs. Inner-suburbs like North-Melbourne, West-Melbourne, Flemington and Carlton remained strongly residential, with a large working-class population. Rows of small
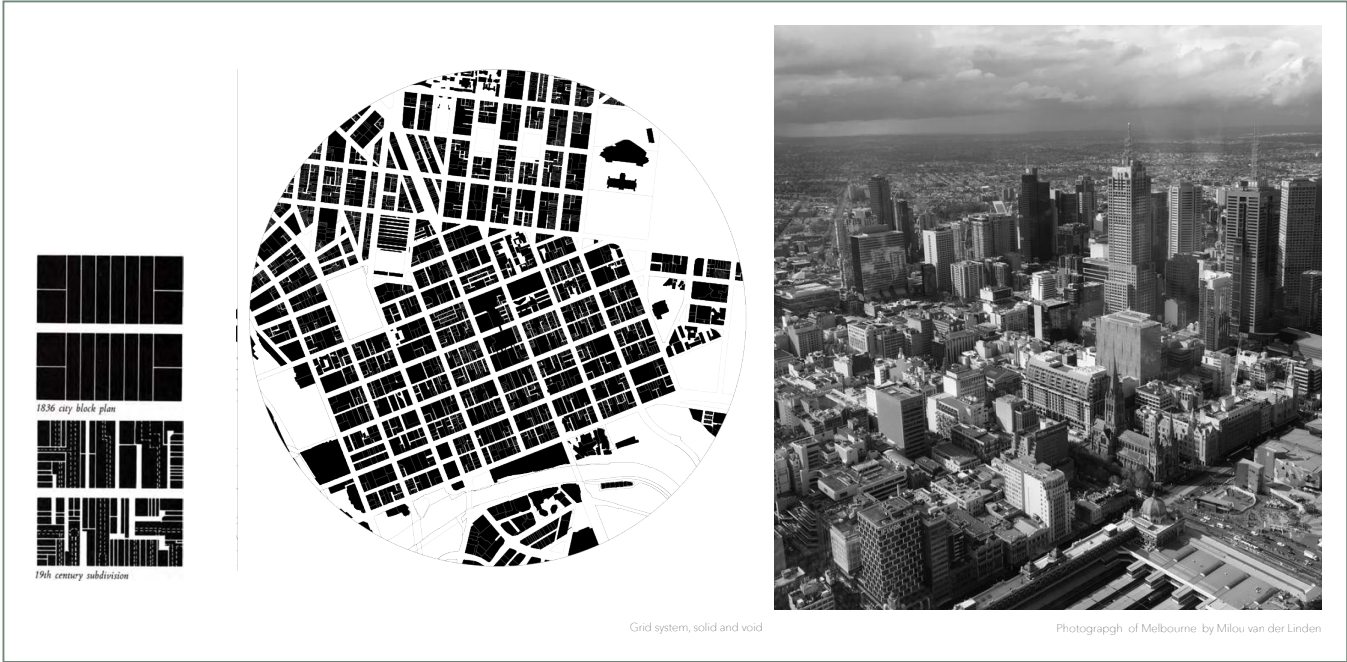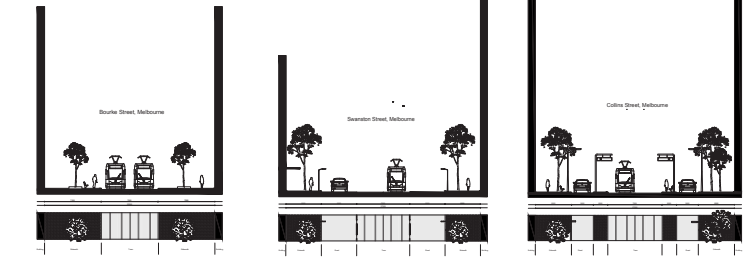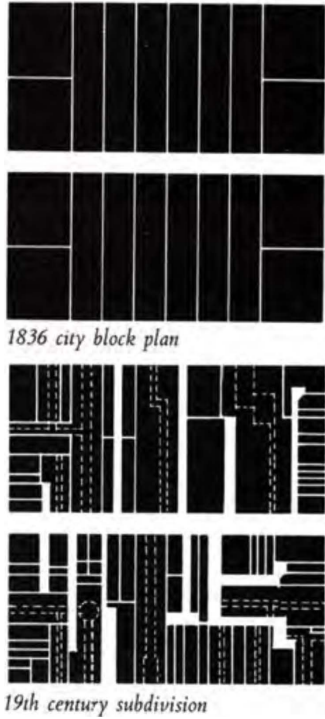
cottages were lined up close to local factories. East-Melbourne and Parkville with their better quality housing stock attracted middle-class residents. East-Melbourne also attracted a large number of professional consultants, especially those from the Medical profession because of the healthcare facilities in that area. After the WWII the development of the city took dramatic new turns. Between 1950 and 1960, a new dimension came up with the redevelopment of inner city 'slum' areas into high rise apartment buildings, office towers and multi-level car parks being erected in the CBD. The first significant office tower was the ICI building from 40 meters high. Another office building that became important was the BP house at St. Kilda road and with the development from the city loop railway network in 1980, Melbourne Centre was complete. A dynamic place to live, visit and play.

Later Melbourne experienced an economic downturn between 1989 and 1992, many office towers become available for transformation into apartments. It was not until this shift that this kind of living became part of the mental space of Australians. This shift also coincided with the end of the white Australia policy, which, within a few decades, resulted in migration from Asia overtaking migrations from Anglophobe Europe, with more and more of the population not prejudiced against apartment building (Gehl, J. 2004) ,because of the normalised high-rise living standards of Asian cities. However, the city is defined by an intricate and permeable urban structure, primarily due to subdivision of the original Hoddle blocks. According to the subdivision an addition of lane ways, arcades and alleys is provide to give access to the newly subdivided land parcels.

Between 1960s-1970s multiple land parcels became consolidated and redeveloped resulting in a culture whereby lane ways were removed or internalised as arcades that are not longer open to the public. The construction of Melbourne Central retail had a negative impact on this urban structure[1]. From the mid 1980s, the City of Melbourne recognised that the central city's through block lane ways and arcades were critical to augmenting the pedestrian network[1]. The city made a massive effort to invite the city's residents and visitors not only to walk more in the city, but to stay a while (Gehl, J. & Svarra, B. 2013) .

Redevelopment of Melbourne's lane ways with an increase of seating in outdoor environments has contributed immeasurably to the character of the city centre as a dense and lively area for multiply activities (Gehl, J. 2015). The lanes inside the block structure of buildings were converted into attractive places for staying or sauntering and provide a link between the north and south of Melbourne CBD. This network also provides settings for activities that cannot be accommodated in the streets, since they carry vehicular traffic. During the 1990s and 2000s, more lane ways throughout the central city underwent pedestrian improvements to extend footpaths, limiting vehicular access and allowing for outdoor dining(Gehl, J. 2015).

With the increase in inner city living, many lane ways have the additional function of providing user-friendly and safe entries to many residences. The lane ways therefore support sustainable inner city development by allowing retention of heritage street shapes to coincide with increased residential density and better use of space (Gehl, J. 2015). This 'unofficial' city, which exists alongside the streets of the grid, hosts a rich interior. Their smaller scale intensifies sensory interaction, with the physical space positioning aesthetic details, sights and smells at a range more easily discernible to humans: this is known as the 'human scale'[1]. Most lane ways are open to the public during day and night, with the amount of retail, bars and cafés, downtown Melbourne becomes a more attractive place to live and to visit. Melbourne, totaling some 230 lanes, places, streets arcades and alleys, expanding the city's pedestrian network while supporting the formal structure of the grid. Accessible and active lane ways in the city centre have been increased from 300 meter to 3,43 kilometer. More active facades and varied uses have been introduced into existing laneways (Gehl, J. 2015).

1836 city block plan

19th century subdivision

Grid system, solid and void

Photograpgh of Melbourne by Milou van der Linden.

1836 city block plan

The main grid

Photograpgh of Melbourne by Milou van der Linden

19th century subdivision

The inner lanes

Photograpgh of Melbourne by Milou van der Linden

SUBURBIA' (NOUN) THE OUTER PARTS OF A TOWN, WHERE THERE ARE HOUSES, BUT NO LARGE SHOPS, PLACES OF WORK, OR PLACES OF ENTERTAINMENT.

If we compare Melbourne's suburbia development with the ones in New Zealand, Canada and the United States we can see that they have a lot in common in history, demography and interconnections because they are Anglo 'colonies of settlement'. Where Europeans dispossessed and almost exterminated the earlier inhabitants. Like they did with the Kulin Nation in Australia. There has been a strong European influence in the way that cities were planned, the only difference is that the cities were established at different times.

The modern suburb is the result of an era of industrialization and fast transportation. Suburbia effectively grew in all Australian cities in the post-war years. The similarity in urban planning structure is one of the main reasons for the creation of similar urban habitats such as paved areas, roads, building walls, garden and park lawns, street planting and parking lots.

"Suburbia is the site of promises, dreams, and fantasies. It is a landscape of the imagination where Americans situate ambitions for upward mobility and economic security, ideals about freedom and private property, and longings for social harmony and spiritual uplift." - The shapes of suburbia, Dolores Hayden.

In America, the development of suburbs went a bit slower. This history construction is the evolution of seven vernacular patterns ,still visible in the metropolitan areas of nowadays. It starts with borderlands in 1820. One by one, American middle-class families chose to reside at the edge of the city rather than in the center. The edge of the city was at this time just a mile or two away. After the individual development of borderlands, there was a request for a sense of community. The design of enclaves added a sense of community to the borderlands goals of house and land outside the city. With the arrival of the electric streetcar and horse-cars it was possible to move further from the city. These new bailouts began as linear real estate developments along expanding transit lines. The shift to the electric streetcar, changed the enclave pattern in the late 1880s. Major streets became

railroads and residents along this lines no longer found those streets desirable. New streetcar suburb housing was located off the major streets and developed in concentric rings around downtown.
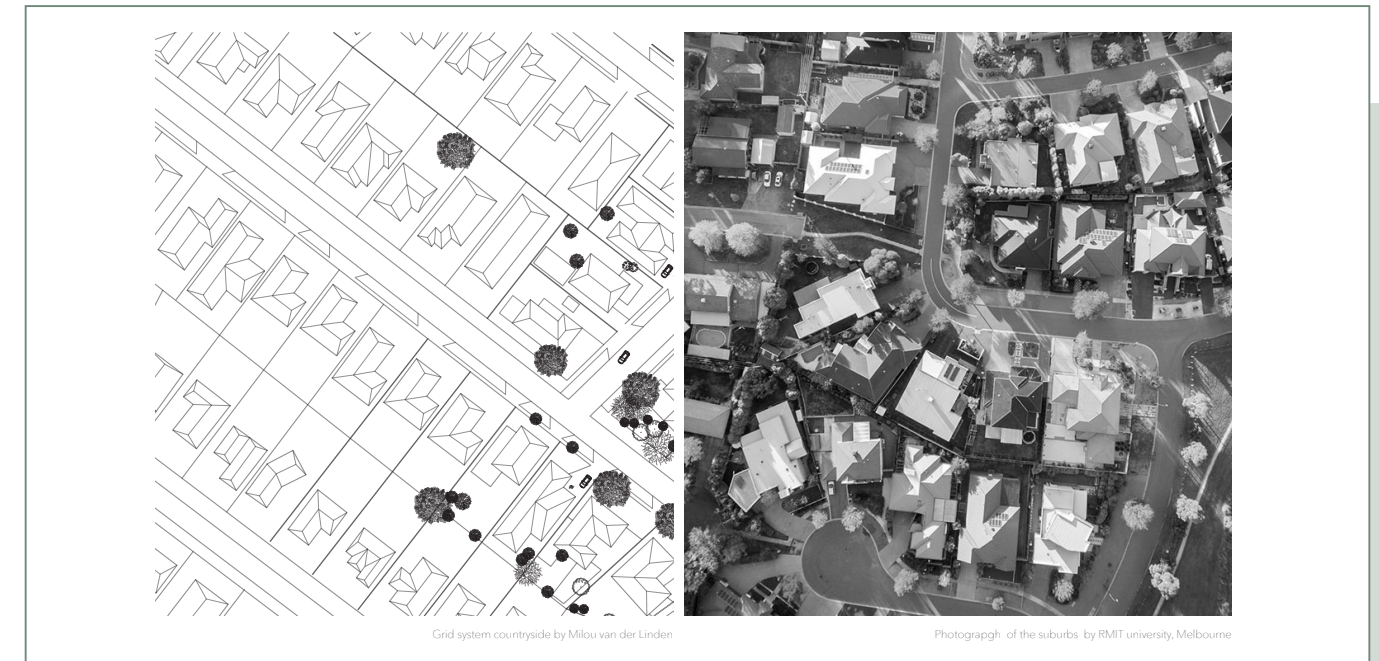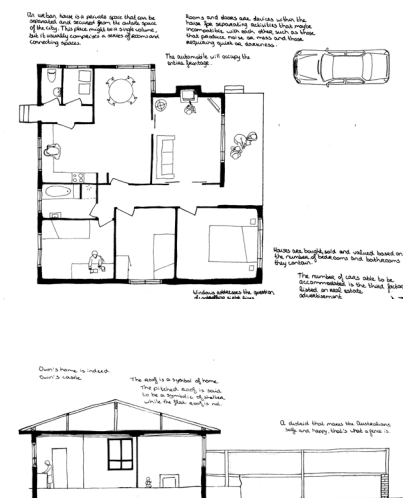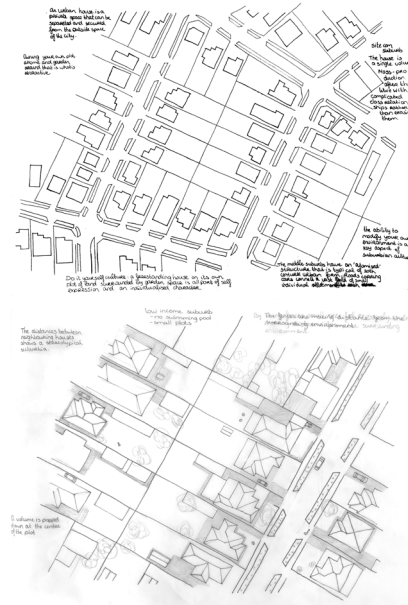
After 1910, entrepreneurs encouraged people with automobiles to reside in even more remote areas than those transit had touched. With the development of 1.200 miles of streetcar lines by 1915, the platting of new suburbs was transformed into a giant land sale, setting the stage for mail-order and self-built housing. It lacked public infrastructure and public space. An alternative came along after the post-World War II. Mass-produced and urban-scale suburbs arrived, the so called sitcom suburbs. The postwar suburbs were constructed at great speed, but they were deliberately planned to maximise consumption of mass-produced goods and minimise the responsibility of the developers to create public space and public services. The sitcom suburbs complicated class relationships rather than erasing them. Then in the end we arrive at the edge nodes in 1960, very cheap land because of the distance to the city. An perfect place to invest is a new city. Developments of shopping malls entered the history of suburbia. New opportunities for work, living and housing was created.

Australian cities like many American cities, reflect the shift towards car-based transport and development patterns from around the 1960s. Inner- and middle- urban areas within 10-15 km of the city centre display predominantly grid-based street layouts, extensive medium- and higher- density development and a dense network of local, accessible urban centers, with good transport services. Outer suburbs, 15-50 km from the city center, dependent on car-based transport (McPherson, 2011).

By the end of the 20th century Melbourne had a population of 3.8 million people. Apart from the city centre, Melbourne was expanded into an urban sprawl spread from Werribee in the south-west to Healesville in the north-east. The urban sprawl, the so called suburbs, was a program of freeway construction tracked in the 1970s and 1980s, while the expansion of rail and tram networks were neglected. These factors led to the rapid growth of the number and use of private cars. Partly as a

Hayden, D.

result of the increasing difficulty of traveling across the city, the central business center declined.

Most of the suburbs in Melbourne were developed after the WWII. Many European refugees were looking to settle overseas and many were sponsored to come to Australia to work with post-war national and industrial developments. After completing their two year stints working under the government's direction, they were eager to rebuild their lives independently. They wanted work and a plot of land where they could build their home and raise their family in peace. By choosing a suburbs to live in it helped that their compatriots were also arriving here as it provided a familiar social and cultural buffer. Consider the development of American suburbs, Australia did it a bit different. What they did different is that they also took the development of public space and public services into account. A lot of inner-suburbs are connected with the city with public transport. The Australian development was namely more political driven than the American development. Australians wanted to be as independent of the state as possible. Still the suburbs are mostly based along main roads to have a sense of being connected with the city. Furthermore, suburbs often arise with a shopping mall, university or hospital because suburbs are the place for major and cheap investigations.

Grid system countryside by Milou van der Linden   Photograpgh of the suburbs by RMIT university, Melbourne

The Australian Dream' a belief that in Australia, home-ownership can lead to a better life and is an expression of success and security.

The origin from the Australian Dream goes back to the period of the reconstruction after the WWII around 1950 and 1960. This period is recognised as a result of development of industry, low number of unemployment, baby boom and the re-movement of rent control housing.

In 1945, entire Australia signed an agreement with the Commonwealth Government under which the Commonwealth would provide cheap loans to the states for the purpose of building public housing, called the Commonwealth State Housing Agreement (CSHA). From this agreement 100.000 new dwelling were build. By the end of 1956 CSHA was renegotiated as Australia experienced a period of almost uninterrupted economic and employment growth. There was almost no unemployment and the State now promoted the purchase to public tenants of the home you rented. It was the end of CSHA and the State government of Menzies dismantled the public housing system and people were able to buy and sell their own properties. This shift from public housing to home ownership between 1961 and 1966 is the end of a genuine public housing system.

Private housing system became important expressed as the Australian dream. The shortage of building materials disappeared and the private builders gradually dominated. Properties were buying plot of land to sell them separately. Instead of selling the dwelling at market value the States could sell it now for whatever. This emphasis was on the mass production of modest detached and semi-detached dwellings with housing authorities concentrated on broad acre estate development like, Broadmeadows, West-Heidelberg and Doveton.

Lots of people from oversea saw this opportunity for freedom in home ownership and moved to Australia. But as the man from the family had to work for the state for two years, the woman and children were sent to migrant camps. People also experienced financial problems because the accommodation for the man was not free and after paying the hostel fees there was often little left in the pay packet. Though the migrants endured these conditions they were happy for the opportunity to leave and start a new life independently in suburbia. This Australian dream was an amazing opportunity to be as independent as possible after those two years. The suburbs was mostly chosen on the people who were already living there, as they had the same background and country where they were coming from.

Typical of the dream is a detached house, often a single volume, plotted on a piece of land, surrounded by a garden with a BBQ. 70% of the Australian population is still living in this dream. When financial independence and home ownership were important, the Australian Dream was primarily identified by embracing a certain lifestyle. If you had reached the dream, consequently you had to follow a couple of urban rituals. Yearly, in summer you had to visit the ocean of holiday, you had to live in a nuclear family with the men as the working motor, mowing your garden every week and in Saturday mornings you have to wash the family car. Mowing preferably with a Victa lawn mower and the car was most of the time a Ford or Holden. Those rules were unwritten but supported by television, autobiographies and romans. The television serie, Escape to the Country, English people are asked to describe the home of their dreams, despite differing programmatic requirements, certain words predominate: character features, inglenook, island bench, view, detached and privacy. Furthermore, Melbourne's suburban culture has been celebrated and exported around the world through the TV series Neighbours, corroborating the post-1950s view of suburbia. From the 1970s onwards, the Australian dream extended to owning a swimming pool in the back garden, a second family car and, for the well-to-do, a beach house or an annual foreign holiday.

THE DEEP HISTORICAL CONNECTION WITH THE AUSTRALIAN DREAM

The Historical culture of Australia can still be seen in Melbourne nowadays. The Australian culture is namely rooted in suburbia. According to Dolores Hayden, Suburbia is the site of promises, dreams, and fantasies. It is a landscape of the imagination where Australian situate ambitions for upward mobility and economic security, ideals about freedom and private property, and longings for social harmony and spiritual uplift (Hayden, 2004).

This dream was focused upon ownership of a detached house, often single storey, on a quarter acre suburban block, surrounded by a garden. Since the turn of the century, more and more people have invested their financial futures in modest-sized homes secured by mortgage debt (Rowe, 1991). In this way the prominence of the single-family home in Australian hearts and minds was established and maintained. As housing prices escalate and the ability to build affordable single-family houses finished more and more households must be satisfied with renting. A further consequence is the inevitable spatial segregation of the haves from the have-nots between tree-lined tract developments and much higher-density garden apartments (Perin, 1990).

I consider to say that it is a broken dream of freedom. The mass produced housing environments suffered almost immediate condemnation for their visual monotony, social conformity and isolated privacy (Perin, 1990). The homogeneity of residential areas, the lack of public transportation, and, thus, the spatial displacement of home from work, shops, schools, and other supporting facilities strongly insinuated another kind of regimentation on the lives of suburbanites. One of the presumed reasons for moving to the suburbs was to congregate inexpensively with likeminded people with similar backgrounds and, further, to take solace and pride in that like mindedness and similarity. There is also a love of shaping space on the part of suburbanites in spite of critical derision.

The childhood memories of living in that suburban house is embedded in the architecture and the architecture is embedded in that suburban house. Their house was their corner of the world, it is their first universe. A stair to go up or down, got the purpose to sit on in your own garden, the house gives protection, corner effortlessly defines space, its limites and distances between neighbouring houses is essential for the privacy. Those observation all comes from the individual memory of suburbia. Such a complex and wide spread environment easily forge a link with memory, especially in your childhood.

With more than half a the Australian population now living the suburban dream, calls for rejecting single-family detached lifestyles confront a culture centuries on the making. On the one hand, the postwar suburbs are cited as the cause of waste, isolation, and commodification in ways of living, on the other, their mass production had only made that culture more accessible (Rowe, 1991).

HOME OWNERSHIP
There are few countries in the world where home ownership is as culturally, economically and politically important as it is in Australia. "The development of mass home ownership has produced consequences for the spatial, social and economic structure of Australia more akin to the realisation of a 'Great Australian Nightmare' than a 'Great Australian Dream'," according to Jim Kemeny (Hayward, 2007).

The ideology of home ownership is the view that the more materially wealthy a society, then the higher will be its rate of home ownership. Kemeny shows, for example, that Sweden and West Germany have lower rates of home ownership, but higher standards of living, than Australia, and that India has one of the highest rates of home ownership in the world, but one of the lowest standards of living (Kemeny, 1978; 1981a, pp. 3-9). The believe that home ownership is inherently superior to renting, and is reflective of people's innate desire to own rather than rent. The capacity to reap capital gains, for example, are all benefits which are associated with home ownership mainly because governments have provided taxation loopholes and a egal framework which ensures that they are the preserve of owner occupiers. Drawing on a number of statements made by prominent Liberal Party politicians during the 1950s, Kemeny argues that home ownership was seen as a way to make the working class both more conservative and more productive. The need to save for a deposit would encourage hard work and thrift, and ownership of property would encourage opposition to communism.

The entry to home ownership was subsidised considerably: taxation exemptions and subsidies were introduced; state housing authorities were encouraged to sell off public housing to sitting

tenants on generous terms; and, most importantly, considerable federal and state government assistance was given to the restructuring of the financial system to ensure mass demand for home mortgages could be satisfied. Public housing was effectively reduced to the status of 'welfare housing', and the private rental sector was left to struggle on without realistic subsidies, taxation exemptions or landlord tenant legislation. According to Kemeny's calculations, over one quarter of the owner-occupied houses in Australia today have been provided through federal government housing schemes (Kemeny, 1978; 1983b, pp9-23).

The negatives nightmare of the dream is associated with detached dwellings and mass home ownership, Hayward argues. This has produced the sprawling cities and privatised lifestyles so characteristic of urban Australia. (Kemeny, 1978; 1983b, pp96-97) And these privatised, sprawling urban structures, in turn, have resulted in the reinforcement of patriarchal relations with women being isolated in remote suburban areas performing an endless chain of domestic duties (Kemeny, 1978; 1983b pp99-100). The pursuit of universal home ownership has also worsened inequalities both between housing tenures - private and public rental housing have become the preserve of the poor and semi- and unskilled workers - and within housing tenures - the 'dynamics' of the private housing market have ensured that the high priced areas have experienced the highest house price inflation (Kemeny, 1978; 1983b, pp94-95; 1981b, pp6-7).

It has also had a detrimental effect on the production of wealth, with vast sums of money being poured into the unproductive turnover of existing houses at the expense of Australia's industrial development. Mass home ownership has been responsible for the relatively small welfare state in Australia, with the distribution of housing costs associated with housing loans diminishing the demand by both the young and the old for a well developed, universal, welfare system (Kemeny, 1978; 1983b, p82).Privatisation, patriarchy and the desire to live in detached dwellings, in other words, are not consequences of home ownership, but rather reflect some of the major cultural, economic, social and political structures underpinning Australian society. (Kemeny, 1978; 1981a, p54).

One of the principal underpinnings of a suburban way of life is preservation of and a belief in private property rights. Soon people in droves began to escape the dinginess and deterioration of the central city, and everyman's house became his very own home. It had become an object for speculative investment and, judging by the building boom, an attractive investment at that. Today, for those who can afford to own it, housing is often another commodity to be treated in much the same way as, say, a stock portfolio. Success in what she (Perin 1977) called the ladder of life was marked by whether one rented or owned one's dwelling, whether it was a house or an apartment, and so on. Higher rungs on the ladder corresponded to large, single-family, detached homes in a garden, in a good neighbourhood, served by good schools, and so forth.

As housing prices escalate and the ability to build affordable single-family houses finished more and more households must be satisfied with renting. A further consequence is the inevitable spatial segregation of the haves from the have-nots between tree-lined tract developments and much higher-density garden apartments (Perin 1977).

As I have lived in Melbourne for six month, I have become fascinated by the difference between living in the city and living in the suburbs. Throughout a couple of short writings that are the outcome of a deep research into suburbia and the associated elements, the idea of suburbia will be clearly described.

DEMOGRAPHICS
Melbourne, Victoria, Australia

POPULATION
4,850,740

DENSITY
500/KM2

ESTABLISHED
30 August 1835

AREA
9,992.5 KM2

The city, designed according to the English Angle model is completely adopted by immigration. A world that was planned is shift in a world the is changing every minute, dominated by a series of high density residential development contributing to the population grow. Main streets are hosting shops, cafes, restaurant, apartments and offices, where inner streets encouraged the development of smaller cafes, bars and shops. For me this contrast represent the coalescence of an official city together with an unofficial city hosting a rich interior. People moving along the main roads mostly by car, tram or walking because they are in hurry. However, the inner street are more layback, typical for the Australian culture, where staying or sauntering is allowed.

The identity of the city today is build up on culture, something that cannot be planned but excited when you give cultural diversity space. The continu change of the city does not fit the Australian culture. For instance, apartment buildings where Australians were not familiar with till the Asians arrived, a city that is opening up throughout it alleyways and pays attention to pedestrians is new and different cultures merging together in an organic way is not possible in the suburbs. Things that as far as I know have never been seen in the historical culture of Australians suburbia.

The Historical culture of Melbourne can still be seen in the city nowadays. The Australian dream was focused upon ownership of a detached house, often single storey, on a quarter acre suburban block, surrounded by a garden, which featured in the back a Hills Hoist and a barbecue (Johnston, 1960). Still all the suburbs show this culture. The ability to modify one's own environment is a key aspect of suburban culture and also part of what makes it so attractive. The do it yourself culture is therefore a huge industry in Australia. At the most basic, the detached house in the suburban culture is a private space that can be separated and secured from the outside space of the city. This space is a single wooden volume, every piece similar in size and design, and it usually comprises a series of rooms and connecting spaces. Rooms and doors are devices within the house for separating activities that may be incompatible with each other, such as those that produce noise or mess and those requiring quiet or darkness. The idea of a house in the contemporary Australian context are bought, sold and valued based on the number of bedrooms and bathroom they contain. Qualitative factors impact on this, but these two statistics are fundamental in defining House type in the public mind. The number of cars able to be accommodated is the third factor listed on real estate advertisements. It can be seen that there is a standard lifestyle in Australia. Like, you have to stay in the suburbs where you have grown up, owning you own house with garden and at least one car in the front garden to get to the city. If you had a bit more money you had two cars and a swimming pool in the backyard.

Analysis from interview result in a double thought about living in a suburb. The buildup of traffic is the main reason why living in suburbia is becoming unpleasant. Compared to the past where everyone could travel from A to B within ten minutes, now it takes over 30 minutes to get from A to B. The population have to plan the daily actives who earlier had the freedom to do what they want. Furthermore, as stated before the lack of facilities and services is the reason for the buildup of traffic. On the other hand, most of the Australian are really happy there, to live in the suburbs, because they could afford more and it replicate the live they had as a child. Also access to green and a sense of community were among the things residents loved most about living in their suburb.

In addiction, the city centre is the opposite. Melbourne city is the basis for a series of high density residential development contributing to the population grow. Designed along a grid with an unique dimension occupied by a population born overseas. Main streets are hosting shops, cafes, restaurant, apartments and offices. However, this grid had encouraged the development of smaller connecting streets and alleyways inside the grid structure, with a rich interior. From these alleyways we can still see the Australians living in the city although this is rare. Because after the economic downturn a boom of Asians saw opportunities in Melbourne city. Office buildings changed in apartments and with the normalised high-rise living standards of Asian cities, Asia overtook the city. With the change of office buildings into apartments, Australians started to think about apartment as buying a box in a tower, a fairly negative thought.

The way of living in Melbourne city centre today can be compared with the way of living in London or Tokyo, however Melbourne centre contains a lot of apartment buildings where the Australians do not live in, the city is opening up. The rich interior of London starts with the tension of openness to the city, never seen before in the culture of Australia. The Australian culture is namely rooted in suburbia. Lived in the city centre of Melbourne, the cultural identity of Melbourne could barely be recognised. Central Melbourne is occupied with the Asian population living in does high density residential apartment buildings. Australians are only entering the city to go to their jobs by car or public transport. The offices are mostly situated on the borders of the city because after the economic

downturn the offices in the city disappeared. A new business district is moved to the other side of the Yarra river.

Cultural qualities that has to stay recognised in the further development of Melbourne are aspects that have never changed or are about to change. An official city that is designed on a car based grid but still host a pedestrians intimity inside that grid where the unofficial city is active. This culture could be seen as a more international culture where a diversity of people live in. The suburbs that truly can be recognised as the Australian culture has the qualities of freedom, space, is more secure and safe, possibility to have you own environment and be independent. Important fact for the redevelopment of suburbia.

IDENTITY IN DENSITY

This short text is about the identity of the dense city of Melbourne, where can we find the identity and how does it exist. Who are responsible for it and how can we move this notion to the suburbs.

Leaving the city and entering suburbia is a passage between two world. Lived in the city centre of Melbourne, a city that exist from wealth and immigration, a city comparable will many other big modern business cities like, London or Tokyo, the suburbs are something completely different. A middle landscape dominated by single-family homes, based on the car and with sometimes a big shopping mall on the edge. A fascination arised for the difference between living in the city and living in the suburbs. To me it seems that the city is an independent environment, changing organically overtime through a population of coming and going (Judah, 2016). A city existing from wealth and immigration. However, suburbs are derived from wealth and immigration as well, it seems that this purpose is overlooked.

Suburbs are known as a save, secure and quiet place to grow up your children. A structure marked by a vast scale, repetition in the built and unbuilt environment, a limited number of dwelling types an a great amount of families are living there. This exciting urban structure of the outskirts of the cities was a promise for a better way of living

away from industry and crowd, based on the car. No other artifact is as pervasive or carries the same emotional charge as the detached house in its suburban garden (Rowe, 1991). This mass-produced housing environments of the 1950s suffered almost immediate condemnation for their visual monotony, social conformity, and isolated privacy.

The city, designed according to the English Angle model is completely adopted by immigration nowadays. A world that was planned is shift in a world the is changing every second, dominated by a series of high density residential development contributing to the population grow. Main streets are hosting shops, cafes, restaurant, apartments and businesses, while inner streets encouraged the development of smaller cafes, bars and boutiques. For me this contrast represent the coalescence of an unofficial city within the official city. This rich interior of the unofficial city grid is a pedestrian environment in contrast will the car based official city. An environment where staying or sauntering is allowed.

The identity of the city today is build up on culture, something that cannot be planned but excited when you give cultural diversity space. Different cultures merging together in an organic way that at the moment is not possible in the suburbs and as far as I know have never been seen in the historical culture of Australians suburbs. Suburbs to live in where chooses because of relations of income, background or culture.

If the city can change from a design grid of an English model lived by Europeans but taken over by an Asian way of living and developing. Why couldn't suburbs change like this. More and more are these areas becoming part of the city. If we introduce the unofficial city that exist inside the urban structure of the city towards the existing plot division of the suburbs. There is a way that this new development can serve as a pedestrian area, making suburbia walkable.

OUTSIDE THE BOX

At the most basic, the detached model house in the suburban culture is a private space that can be separated and secured from the outside space

of the city. This space is a single wooden volume, every piece similar in size and design, and it usually comprises a series of rooms and connecting spaces. Rooms and doors are devices within the house for separating activities that may be incompatible with each other, such as those that produce noise or mess and those requiring quiet or darkness. The idea of a house in the contemporary Australian context are bought, sold and valued based on the number of bedrooms and bathroom they contain. Qualitative factors impact on this, but these two statistics are fundamental in defining house type in the public mind. The number of cars able to be accommodated is the third factor listed on real estate advertisements (Schaik 2018).

It can be seen that there is a standard lifestyle in Australia. If you have grown up in the suburbs you will stay there because of your really nice childhood memories, owning you own house with garden and at least one car in the front garden to get to the city is still the way the model home is recognized and built. And if you had a bit more money you had to show this of with two cars and a swimming pool in the backyard. In the same way, the roof is a symbol of home. The pitched roof is said to be symbolic of shelter while the flat roof is not, and therefore unacceptable on symbolic grounds. Beside this, it is also a symbol of security. It is considered, and even shown in a building-society advertisement, as an umbrella, and the houses directly reflect this view (Rapoport 1969).

Another factor of the greatest importance is the patterns of model house a subdivision of land into relatively equal and therefore uniform lots facing an ordinary road, the private ownership and control of a plot of land, a lot-by lot placement of houses, and the design of houses as model houses. This single-family house offers light and air from all sides. Access to the ground and to the street is direct, providing intimate connections with a range of "natural" settings from tamed lawn and landscaped garden to rural trees and wild shrubs.

What is sought for, and offered, is a symbol of an ideal life, varied in minor degree to suit differences in the individual interpretations or understanding of this ethos. The popular house is based on the ideal that one's home is indeed one's castle, and on a belief in independence. The house

is to be as private and isolated as possible, with a most like separation. Critics believed that the uniformity of the mass-produced setting led to a social homogeneity and conformity that living in identical houses led to identical lives (Chow, 2002).

The whole concept of the private house and the fence may well be an expression of territoriality, which seems to be a crucial concept. The nature of territorial symbols in relation to problems of overpopulation, crowding, and so on, in a matter of great importance. That could be a reason why suburbia is so scared of being densified (Rowe, 1991). In general, one could argue that modern symbols related to the house are as strong as those of the past, and still take precedence over physical aspects, they are only different.

PARAMETERS FOR THE NEW DREAM

Underneath is a serie of parameters coming from the Australian dream, the model home and the Australian family as a base for the new model of suburbia. These parameters a the result of literature research and small interviews.

Surrounding
The environments of the suburb need to provide a safe and secure place with enough green space around.

Neighbourhood Amenity and Appearance
New housing development should contribute to an overall improvement in the character and amenity of the neighbourhood in which it is located. Buildings are setback from street alignment, the single volume urban house, the great amount of green space and pitched roof a feature that are characterising suburbia.

Target group
As suburbia is a place for family living, it is important now to introduce a lifestyle for the youth and elderly in combination with family living. An important fact is that suburbs are class, family and friend related and that is something to remain.

Privacy
Privacy in the suburb is visual throughout all the fences, walks and blinds. An atmosphere is created that keep people away from you property. This hard

boundary shouts for privacy instead of give a sense of privacy. This tells us that in the suburban lifestyle privacy is important. Therefore the new model has to include private space for each dwelling and all external private open space be designed to achieve a high level of privacy, avoiding overlooking where possible.

Sense of Address
All housing must have a sense of address from the street or from the access point of another public space, with their own entrance and front door giving a feeling of ownership.

Private outdoor space
The private outdoor space around the single volume dwellings is often used as a place to store stuff and for barbecues. People store their stuff in self made shelves and are no part of the house. In the new model for suburbia it's therefore significant to take this two elements into account. Storing stuff could be integrated in the plan and barbecues could become part of a social tool for the neighbourhood.

Parking spaces
Cars are still an important part of the Australian lifestyle. This equipment needs to take into account but should be less visible from the view towards your home. This car park could be collective, under the buildings or beside the plot.

Urban structure
Beside their own gardens, suburbs also contain a lot of open green spaces. Families love to go their to walk their dog, do exercises and let their children ride their bikes. Because those things are not possible in the streets where they live, occupied with cars. The shared outdoor spaces need to provide a place to run, do sports and walk your dog as well as a place for playing, cycling and to come together.

Shape of Housing and Sites
The shape and configuration of the house will often be determined by the maximum allowable site density, which will impact on size of allotments, size of house footprint and number of levels. The shape and configuration of the house will contain a core and a number of rooms. The equal plot distribution will serve as a base for the development of suburbia. The higher density sites should have the

same shape as the lower density sites. It is important to have an equal division of built and unbuilt space. The scale of the single volume urban house has to contain that goes together with a footprint of ± 120m2. Furthermore, the existing structure is 25% built and 75% unbuilt space, what means that the new model on the plot will be around the 1050m2.

Amount of Dwellings
According to the call of Melbourne 2030 or the forecast of the population grow in the suburb, we need as least a densification of 14 dwellings or 56 persons on the site.

Australia's population will grow from 22 to 36 million by 2050, which means that 6.5 million new housing units will be required in the next 35 years[1]. All five of Australia's major metropolitan areas were 'severely unaffordable' for the 12th year in a row according the 2016 Demographia International Housing Affordability Survey[2]. Consequently, Melbourne has been termed the fifth most unaffordable housing market in the world. The necessity for a change is significant, as cities becoming overcrowded and the opportunity to move to the suburbs is unaffordable. Simultaneously suburbs need to density as well with a development of affordable housing.

The prevailing development patterns in Melbourne include some higher-density infill and redevelopment in central, well-serviced locations, conservation of established middle suburbs in their current state and resistance to redevelopment in their areas, and a strong commitment to new suburban, low-density 'sprawl' development. New 'sprawl' development, often regarded as a strategy to address housing shortages and affordability issues, and resulting in an ever-expanding metropolitan area.[3]

Analysis of existing urban areas, local centres and transport services across various regions reveals that inner areas benefit from a clustered structure of walkable neighbourhoods, with most dwellings within walking distance of a local centre, and comprehensive public transport coverage. Middle areas still consist of this clustered structure of walkable neighbourhoods, only most of the dwellings are to far from local centres and public transport that a car is needed. Therefore walking in those areas remain impossible. Outer areas, however, display large suburban expenses reflecting car-dependent development. The lack of facilities and services in the middle and outer suburbs results in a separation between suburbia and the city centre.

Despite the decline of the Australian Dream due to modern planning policies, house prices and the influence of immigration on demographics and culture, many observers still consider ownership of a dwelling as important to many Australians even if they cannot achieve it.[4] While building the city one must not forget the house,

considered in the singular, for private user who will put his or her name on the letterbox, something really important in the history of Australians urbanisation. We have to change the illusie of suburbia to contribute to the population grow. The Australians have the change there thoughts in relation to living closer together.

Because the Australians are still deeply connected with the sense of the Australian dream it is important to maintain this thought as best as possible. In order to understand what ingredients' contributed to this deep connection in urban development, analysis in patterns of inhabitant, interviews and photographs will be studies. Together with analysis in density, accessibility and affordability that are the three main problems in suburbia with be provided.

Growth Melbourne, Australia
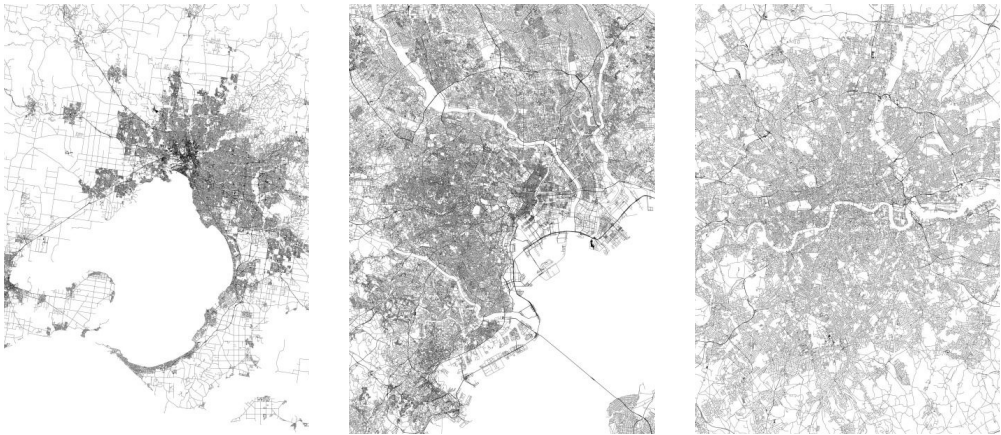
Melbourne, Australia
Area: 9.990 km²
Population: 4.963.349
Established: 1835
Density: 430/km²

Tokyo, Japan
Area: 2.188 km²
Population: 13.227.730
Established: 1869
Density: 6.225/km²

14 times densely populated

London, England
Area: 1.577 km²
Population: 8.674.713
Established: 43 AD
Density: 5.354/km²

12 times densely populated

DENSITY

Density' (noun) *the number of people or things in a place when compared with the size of the place.*

Density is one of the important concepts for development of plans. Suddenly, density becomes an uncomfortable subject which deeply affects our decisions. We know that the dense city has to be built but still the issue of residential density is once again an important issue in strategic land use planning in Australia according to historical connection with the development of suburbs.

Restricting the concept of density to the number of dwelling per hectare is an deduction to start a development plan. What is important in the life of a sustainable city is not its physical density, but the density of activities that the built up area generates.

"There is no good density or bad density in itself, but that density becomes good or bad in its integrated context."[1] - Dbook

Forecasted is that Melbourne's population is going to be double over the next 20 years presented by .id, the population experts[2]. Currently the new suburbs that will be developed needs to contain a density of a average of 10 dwellings per hectare. Melbourne 2030[3] called a metropolitan strategy for a new approach to suburban development, it is suggested that in new growth areas, a general increase in residential density to approximately 15 dwellings per hectare or a gross residential density of 50 persons per hectare.

FEASIBILITY STUDIES

How does a view of suburban space transform assumption about achieving greater density? To assess the possibilities, I must understand commonly held assumptions about the definition of density. Density typically is described as a ratio, a comparison of dwelling per hectare or people per dwelling. Restricting the concern of density to the number of dwellings per hectare is an deduction that impairs any analysis. What is

important in the life of a sustainable city is not only its physical density, but the density of activities that the built up area generates stated by Javier Mozas, auteur of Dbook. So it is important to take density as a number of dwellings per hectare but also think about the reconfiguration of the structure of the setting. In this way, our suburbs can be designed to do more: to support connections and social interactions with privacy; to accommodate diversity with sharing; and to provide outdoor spaces without waste.

This studies on feasibility is a result of the possibilities of densification that could fit in the suburbs. To see the suburbs as a fabric, as a new artifact of a representation that capture the continuities and shared characteristics of the built environment throughout a setting of dwelling that can be seen as systemic.4 It can allow me to see not just how many people can live in a setting but alternatives for how more people can live together. The focus in the first place has been on the physical density expressed in the amount of dwellings and people fitting on the plot. This physical density will later be expend in the possibilities of a mixed housing culture, building height and footprint. Furthermore, the impact on Local Community is describe to get an understanding of the consequences. As stated, beside the physical density, it is important to give attention to the structure of the setting. What could it be and what do we want it to be?

The feasibility study can be divided into three main groups. The first own is a collection of "mat" solutions. This solutions are covering the entire or a big part of the plot and this closely packed forms are interesting as they can contribute as a typical community building. A consequence of this solution is that external space should be covered inside the building. The second group are the "courtyard" solutions closely packed, suggesting a system of access to each of the units with a distribution of open space within them. Both solutions are using suburbia as a place for extreme densification because of the urban sprawl. The "courtyard" solutions is an outcome whereby different elements of the Australian dream and qualities of suburbia comes together. A courtyard contains in inside garden surrounded by walls, like the Australian separate there plot for their neighbours. The other group is the mini apartment

villas, a way of development that fits the scale of the existing urban single volume housing structure of suburbia, the detached house. The mini apartment villas in this case can contain as well as apartment also houses. The outside of this villas can be designed in the same way as the existing housing designs.

All the different studies are examined considering the footprint, density, uses and impact on the local community. The footprint of all feasibility studies are a result of a study from Leon van Schaik. Van Schaik has analysed the suburban room, with sized tested against different activities and furniture arrangements and also against achievable spans of economical construction types. Room sizes of typical Australian contemporary suburban houses of the middle suburbs can be divided into a small flexible room of 4.5x6.0m or a large flexible room of 5.4x7.3m. Beside this living space a core is required and an external space of 5.4x5.7. This research resulted in a couple of configurations to develop new opportunities for the suburbs. A house with 2 rooms and 1 core result in a space of 75m2, a house with 3 rooms and 1 core result in a space of 90m2, a house with 3 rooms and 1 core result in a space of 90m2 and a house of 4 rooms and 1 core results in a space of 120m2 and so on.

If we look to the existing housing floorplans of St Albans, they all exist of 4 rooms with 1 core. From the research of Van Schaik this will result in a space of 120m2. As a starting point of making a proposal for a new model for suburbia, this will be taken as a starting point.
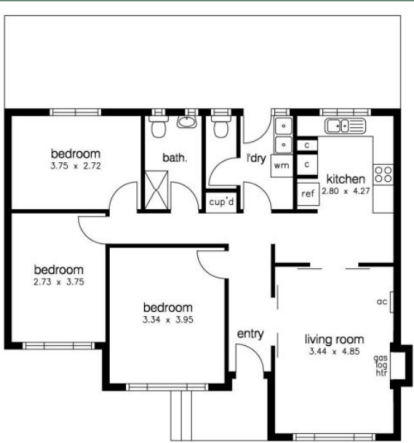
Single volume housing type of St Albans
- Three bedrooms
- Bathroom
- Kitchen
- Dining
- Living
- Laundry

Dwelling footprint: ±88 m2
External space: ±35 m2
Total plot: ±644 m2
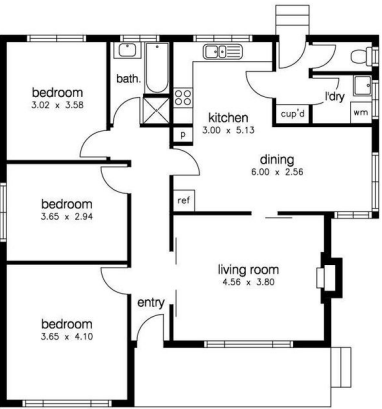
Excisting housing strock, Melbourne Australia

Single volume housing type of St Albans
- Three bedrooms
- Bathroom
- Kitchen
- Dining
- Living
- Laundry

Dwelling footprint: ±104 m2
External space: ±11 m2
Total plot: ±547 m2

Single volume housing type of St Albans
- Three bedrooms
- Bathroom
- Kitchen
- Dining
- Living
- Laundry
- Sunroom

Dwelling footprint:±132 m2
External space: ±44.5 m2
Total plot: ±543 m2

Feasibility studies on site ST Albans Melbourne Australia
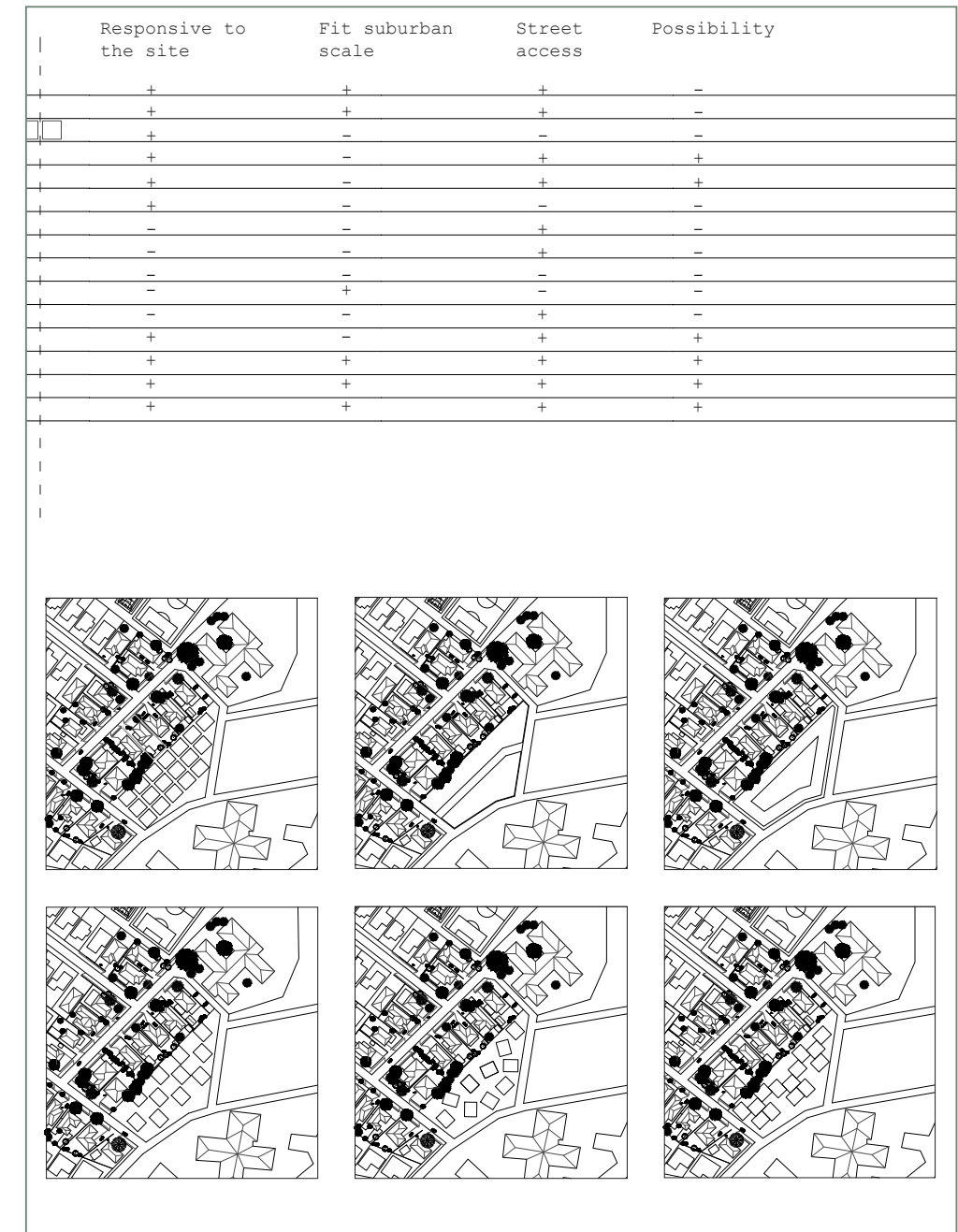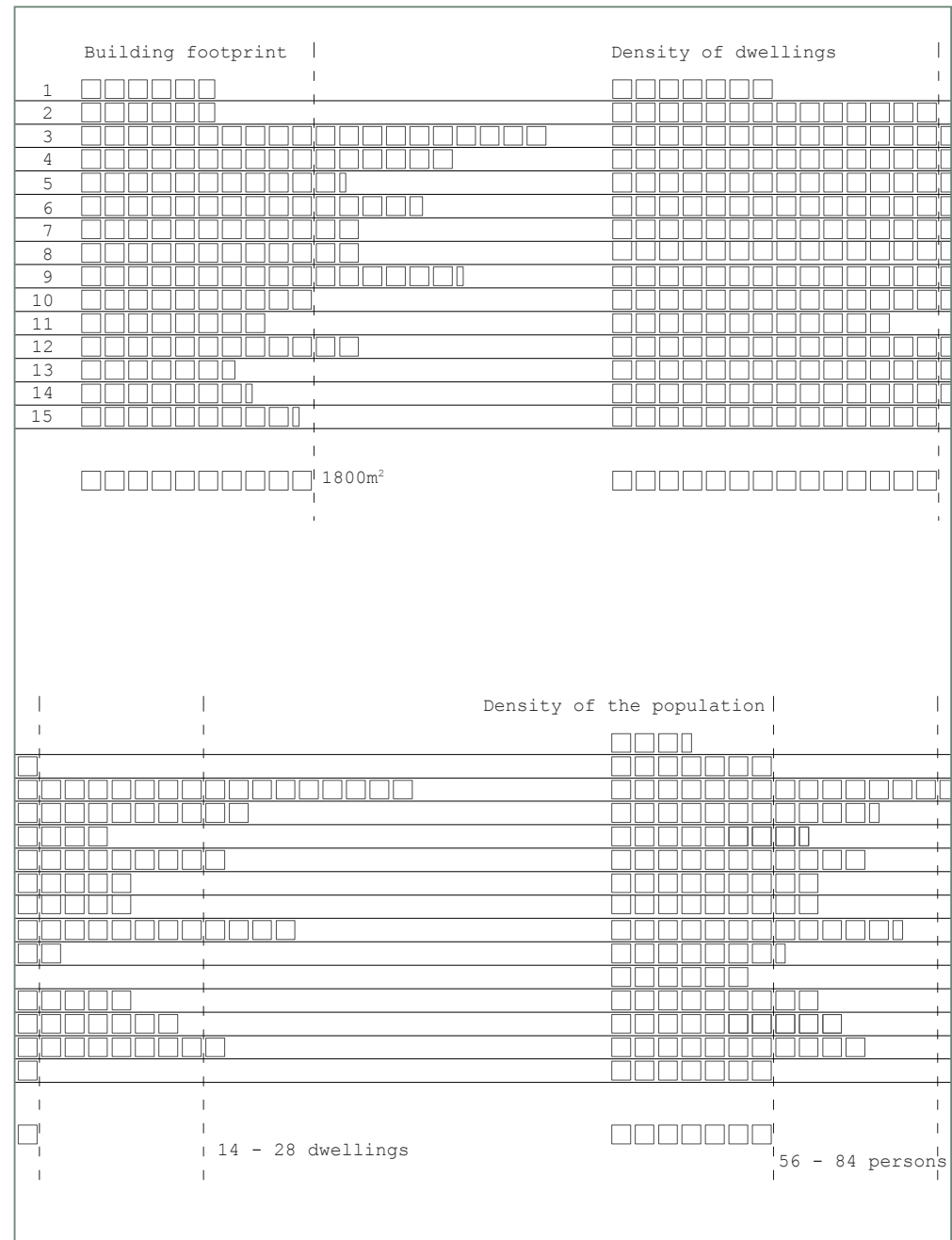
OUTCOME FEASIBILITY STUDY

The outcome of the feasibility study is focused on the footprint, density of dwellings, density of population, responsibility to the site, scale of the suburb, street access and the possibilities. The footprint needs to be around half of the site to have a equal distinction between built and unbuilt space. According to the densification, we need at least 14 housing units on the plot of ±3600m² or a density of 56 persons. This is when the population of the suburbs has to double. We could say that a feasible forecast is to put at least 14 units up to 28 units on the plot, with the possibility to divided the units into more livings under one roof. The population can reach a quantity of a maximum of 84 persons because one individual person need a least 42m². So the population will be between two and three times the existing population. The level of the dwelling could be discussed later according to the mixed culture of housing types that is required.

Furthermore, it is important that the volumes are anchored on the site. Resources to give it arguments are is the volumes are responsive to the site (structures), if it fits the suburban scale (typology) and later on the design can be transformed according to sightlines. To stay in the scale of suburbia, to redesign the Australian dream as good as possible and to develop a model that fits all suburbs, a decision is made to define the mini apartment villa and courtyard feasibility studies in a detached way. Because at the moment all the new low rise, high density developments regarding densification around the suburbs are apartment buildings or row houses. I think that it is a good opportunity to introduce a new model of low rise, high density development namely the mini apartment villas. This is a design that fits the scale of the suburban house and plot distribution, but is more dense, universal and could fit everywhere in suburbia.

As a result, option 4, 5, 12, 13, 14 and 15 are having possibilities to be suitable for the proposal. Option 4, is too dense for the site but with the interesting proposal to introduce courtyards ever unit is in need of more square meters that result in less units on the site so the density will decline. Feasibility study 5 is comparable with option 4. Both designs are a "mat" solution, but option is less dense and will have in inside shared courtyard, that could contribute to a community atmosphere. Beside the "mat" solutions that can be transformed into mini apartment villas, there are also some detached studies that appear in comments for the site. Thereby are all the option, 12, 13, 14 and 15 similar to each other. 12 has the opportunity to fit into the suburban scale by making the site less dense, this is possible because by taking a courtyard proposal into account, the units need more space whereby less units resulting in a scale that fits suburbia. This opportunity results in solution 13, 14 and 15. All three of them are able to density and have possibilities for a diverse housing culture.

The next step is to structure the units, landscape and setting to achieve a responsive design. For the proposal, the sizes of dwellings from the research of Van Schaik will be uses. 120m2 for a family; 90m2 for elderly; and 75m2 for an two bedroom apartment.

Building footprint | **Density of dwellings**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

1800m²

Density of the population

14 - 28 dwellings   56 - 84 persons

Responsive to the site	Fit suburban scale	Street access	Possibility
+	+	+	−
+	+	+	−
+	−	−	−
+	−	+	+
+	−	+	+
+	−	−	−
−	−	+	−
−	−	+	−
−	−	−	−
−	+	−	−
−	−	+	−
+	−	+	+
+	+	+	+
+	+	+	+
+	+	+	+

The outcome of the feasibility studies

ACCESSIBILITY

Accessibility' (noun) the ability to reach or enter a place or building

Transport systems and other infrastructures are under increasing strain. Suburbs are highly dependent on car-based transport. Public transport services are more dispersed and less frequent, and walking and cycling are discouraged, by lack of appropriate infrastructure, and significant distances to destinations. If you have to opportunity the catch the train it is still impossible because of the too few parking places.

Accessibility not only incaludes the access to public transport but also to facilities and services. People who cannot afford to travel to the city center needs to have the opportunity to stay in the suburbs without the need of a car. Melbourne 2030[3] called for a new approach to suburban development, establishing clustered neighbourhoods which provide walkable access to local facilities and services, reducing reliance on automobiles. But not only walking could be part of the future development of urban planning, also cycling could be an upcoming opportunity to reduce automobiles.

The key tenet of sustainable urban planning and design is supporting the viable provision of facilities and services (shops, community and health facilities, public transport, schools), which are accessible by walking, cycling and public transport within 500m. This has to go together with the densification of a suburb to decrease the distances inside the suburbs.

LOCATION

More and more people living in cities with suburbs conceived as appendages to it, rather than being part of the city according to Leon van Schaik in his book Suburbia reimagined (Schaik, 2018). Suburbs are increasingly recognised as part of a city's well being with their own alternative ideology and opportunities for urbanity and ecological sustainability. This subdivision structures can offer new possibilities for sustainably integrating living between generations and between established and arriving migrant communities.

Therefore, this study will focus on the "middle suburbs," the suburbs between the city and the outer suburbs. To define the "middle suburbs", research from Monash University, Infill Opportunities is attached[2]. The middle suburbs are describe as the area between 7 km - 25 km from the city. Within a radius of 7-25 km some commonalities in allotment size and configuration can be observed. Compared with the city within a 7 km radius, where is a predominance of urban housing typologies which are not representative of the "middle suburbs". This research specialized the extent and age of Melbourne's urban development, suburbs that were developed between 1950-1979 are of an age where physical, environmental and technological upgrade is likely to be needed and redevelopment strategies would be most effective. Furthermore, there is an extensive post-war development across this suburbs making it suitable for replicable design interventions. Analysis of dwelling densities, population, and land area for the inner, middle and outer regions revealed the significance of intensification strategies for middle suburban locations, where access to transport, employment, education and amenity is relatively high.

The location for this project is selected by analysing different studies and reports on suburbia, containing their history of development and future plans. One of the studies is The Liveable Melbourne study from Deloitte Access Economics and planners Tract Consultants. In this study each

of the city's 321 suburbs is ranks according to 15 criteria including, how far you are from the CBD, transport: trains, trams, buses, traffic, how far you are from the beach, access to schools, shops, cafés and restaurants, parks, trees, hilliness, arts and culture, crime and broadband and mobile phone coverage. Another report coming from Urban Development Institute of Australia CEO about future housing in Melbourne stated the western part of Melbourne is the nation's fastest-growing region at the moment.
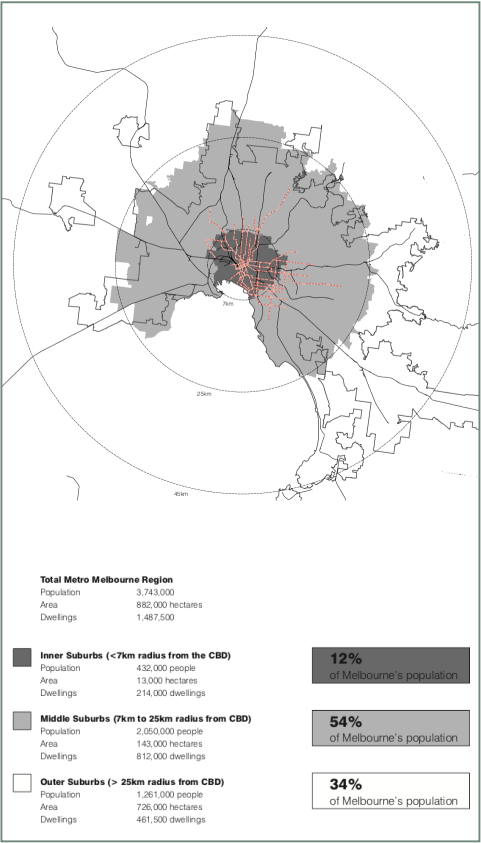
"Part of it is affordability; to live 10 kms west of Melbourne's CBD is far cheaper than living 10kms east. Beyond that, there are a lot of lifestyle elements that people like, such as good public transport and thriving retail precincts." - Urban Development Institute of Australia CEO Danni Addison

This means that the western parts of Melbourne have to opportunity to stay affordable by introducing the correct interventions. Furthermore a report about the Rail Plan of Melbourne is focussing on the western transport network. The key priority is untangling the regional and metropolitan rail lines in Melbourne's west by delivering new separate metro lines and giving regional trains and lines to regional passengers. On account of the affordability and the new development of public transport, a western suburb could have a really good potential for the project. The first change will be the creation of a new railway line, with high capacity trains, from Sunbury to Cranbourne and Pakenham. Consequently, the suburbs along this railway will improve in their accessibility and looking to the recent development does suburbs will increase in value. To prevent the change from an affordable place to an unaffordable place this project will invest in one of the suburbs along this railway line with a new development that support the idea of staying an affordable place overtime.

One of the suburbs along the railway track is St. Albans, an almost completely residential area, at the moment ranked 253 out of 312 according to the The Liveable Melbourne study. St Albans' liveability suffers from a lack of man made amenity, with very limited dining options, culture and shops. The area is further disadvantaged by its flat landscape

and high crime rate. According to these fact, St. Albans is in need of a smart intervention to turn those facts down and with the investment in the new railway, this area will already rise in quality.

The figure below shows a part of Melbourne, with in the middle the city centre. From there you see the railway and tram network expanding towards the suburbs. On the west side of the city centre, St Albans is situated, marked as an outlined area. All the other part that at marked as stripped areas are suburbs developed around the same time. Consequently, this development is structured in the same way, shown in the figure on the next page. Those similarities in development and plot distinction means that St Albans can act like a model for the condensing of suburbia.

Total Metro Melbourne Region
Population 3,743,000
Area 882,000 hectares
Dwellings 1,487,500

Inner Suburbs (<7km radius from the CBD)
Population 432,000 people
Area 13,000 hectares
Dwellings 214,000 dwellings
12% of Melbourne's population

Middle Suburbs (7km to 25km radius from CBD)
Population 2,050,000 people
Area 143,000 hectares
Dwellings 812,000 dwellings
54% of Melbourne's population

Outer Suburbs (> 25km radius from CBD)
Population 1,261,000 people
Area 726,000 hectares
Dwellings 461,500 dwellings
**34%** of Melbourne's population

Study of the urban sprawl Melbourne

ST ALBANS

Population: 37.309
Area: 13 km2
Location: 15 km from Melbourne
- The median age of the population is 36 years of age
- 34.6% of the people is born in Australia
- St Albans has three train stations, Ginifer, St Albans and Keilor Plains.

St Albans is a suburb 15 km north-west of Melbourne, Victoria, Australia, located within the City of Brimbank local government area, established as a township in 1887. Further development of St Albans was not forthcoming because of the economic depression of the late 1890s and did not restart in large numbers until after World War II, with the influx of displaced people and continuing through the 1950s and 1960s with the influx of European migrants. St Albans in 1950 was a small, semi-rural village of 850 people with lots of empty paddocks. Pretty soon these paddocks were sprouting bungalows and half-houses galore. Many of the migrants did it from the ground up, because they dug holes for the foundations and built their basic home themselves. By 1960 the population had increased to 7,000 and by 1970 it was 20,000 – it was an incredible growth rate that was completely unexpected. The suburbs therefore shows a wide spread sitcom suburbia development for the working classes and the housing shortage after the WWII. St Albans remained geographically isolated from other suburbs, with large areas of open land between it and other suburbs. The main commercial and shopping precinct is located on Main Road West, Main Road East, Alfrieda Street, the main railway station and East Esplanade. Beside the main railway station, called St Albans station, there are two other stations, Ginifer station an Keilor Plains station.

To narrow the site, the area around Ginifer Station will be studied. This area is completely residential without any commercial and shopping precinct. The residential area is a design according to the mass-production sitcom suburbs after the WWII. A separation is visual between an enclaves- and street layout. Both equal distribution of land for the lower class of the population. This can be seen from the size of the plots and the single story house. There

St Albans

Boronia
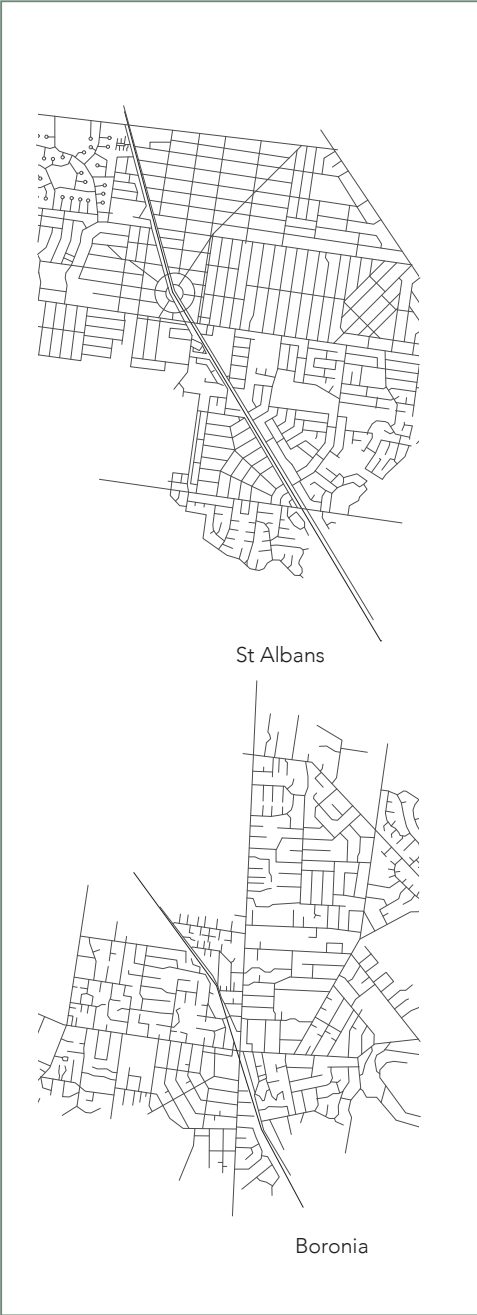
are no swimming pool is the backyards, only the amount of parking lots, bathrooms and bedrooms is counting for the value of the plots.

Ginifer Station is the first station arriving in the suburb St Albans, located at the south of the Main St Albans Station, isolated from suburbs around by the highway, Jones Creek and Stony Creek. The accessibility to this area from the city is through the highway; Western Ring Rd, Furlong Rd, Albans Rd and the railway. The railway and Albans Rd separate the area around Ginifer Station in two part that results in a more and more individual character. Important facilities are the Victoria University Campus on the west of the station and the Western Health Hospital on the east of the station. Hospitals and universities have also historically been established as bounded islands of defined function and purpose.

'The suburb is dominated with fences. Lots of cars, the hum of the car is never far away and could be heard for the whole time. Not many trees, concrete gardens, the classic brick veneer Australian home. There were lots of people moving around the area, coming and going from the hospital and train station. Everyone was very kind and smiled at me. Plenty of people using public transport.' - Sarah, resident of Melbourne, Australia

Ringwood East
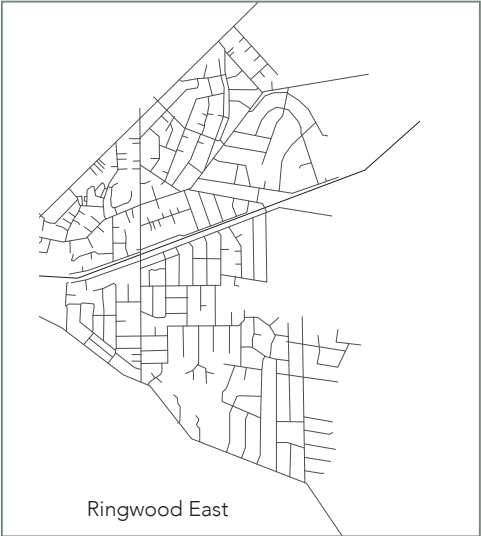
Density

Private dwellings	92.6%
- Separate house	75.6%
- Semi-detached	14.1%
- Apartment	9.7%

Family

- Couple family without children	29.5%
- Couple family with children	43.0%
- One parent family	24.4%
- Other	3%

Dwellings

- 1 bedroom	2.1%
- 2 bedrooms	16.2%
- 3 bedrooms	59.9%
- 4 bedrooms	17.3%

Restricting the concern of density to the number of dwellings per hectare is an deduction that impairs any analysis. What is important in the life of a sustainable city is not its physical density, but the density of activities that the built up area generates stated by Javier Mozas, auteur of Dbook.

As we have to double the population of Melbourne towards 2050. We have to focus on a change that in 2050, Melbourne would be expected to reach 8.5 million people, coming from a population of 4.3 million. Nowadays the suburb St Albans contains a population of 37.309 citizens in a area of 13 km2 with a density of 2.870/km2 equal to 28,7/ha. The amount of dwelling in this suburb is 13.753 in a area of 13km2 with a density of 1.058/km2 equal to 10,58/ha.

Melbourne 2030 stated a density of dwellings 15/ha but if we have to double the population of St Albans we need at leased a density of 21,16 dwellings per hectare.

Accessibility

Number of motor vehicles

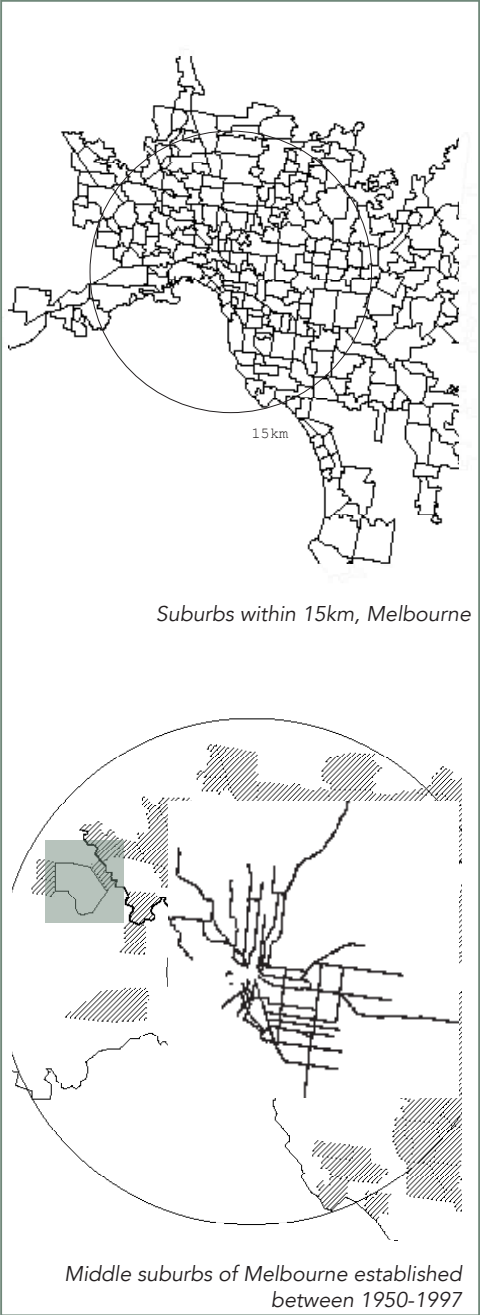| - none	10.8%
- 1 motor vehicles	36.5%
- 2 motor vehicles	30.4%
- 3 motor vehicles	16,4%

Travel to work
- By car (own transport)   71%
- By train (public transport)   17.7%

Facilities and services are the terms to define accessibility. The area around Ginifer station is connected to the railway system to the city of Melbourne. Furthermore, there are two main highways entering the suburbs and surrounding suburbs are connected to this area and Ginifer station throughout a bus line. It is significant to surrounding neighbourhoods to be connected because St Albans host an important hospital, called Sunshine Hospital. Beside the hospital there are other health facilities like, a Radiation Therapy Centre, Western Centre for Health Research and Education, Pharmacy, Physiotherapy and an elderly care. Future, the suburb contains a bottle shop, hairdresser, a small bakery, Cosmetics shop and a clothing maker. All those smaller facilities are established in the existing houses because it are mostly private companies.

Another major institution is the Victoria University Campus, St Albans Campus is a hub for health & nutrition research. Situated close to St Albans main station. Schools for children are also around called, Jackson School, St Albans Meadows Primary School, Holy Eucharist Primary School, Willis Street Kindergarten and University Park Primary School.

It is evident that there is a thresholds towards services and facilities, as everything in the suburb is car-based. The ability to walk or cycle is not there. With spatial distribution of dwellings within walkable catchments, appropriate housing-type mix and corresponding densities, it is possible to achieve an urban structure, of clustered neighbourhoods, where all dwellings are within walking distance to at least a local activity centre.

This local activity centre could be the hospital in this district. The densification of the suburb, accessibility can be introduced as a walkable or cyclable distance. An accepted understanding of behavioural patterns relating to walking for convenience services and transport is a 5-minute walking catchment related to a 400m of walking.

Suburbs within 15km, Melbourne

15km

Middle suburbs of Melbourne established between 1950-1997

AFFORDABILITY

Affordability' (noun) the state of being cheap enough for people to be able to buy

"The home owner feels that he has a stake in the country, and that he has something worth working for, living for, fighting for." - Kemeny, J. "The Ideology of Home Ownership." Urban Planning in Australia[1]

We have to see affordable housing as an architectural assignment. In emerging economies all over the world, massive urbanization is leading to an urgent, acute need for affordable housing. Mass urbanization and the lange-scale housing challenges that go with it are not new phenomena. During the European industrial revolution, large numbers of rural residents immigrated to the cities looking for work and better living conditions. The cities of those days were hardly geared to such a challenge and this soon led to the emergence of slums, where people lived in appalling conditions. (DASH Woningbouw wereldwijd / Global Housing) That leads to the development of suburbs. In the suburbs home ownership was one of the most important things to achieve. Therefore its significant to deepen into the new possibilities of home ownership to make the new typology for suburbia affordable and remain affordable.

As Melbourne has been termed the fifth most unaffordable housing market in the world and suburbs exist from home-ownership that doesn't fit the lifestyle of today, a change is needed. Therefore, affordability, ownership and stakeholders are important categories to take into account. How can our generation, our children and their children's generations afford to remain in their environment, even as the world is becoming mostly urban? Who is gonna provide the building, who is responsible for the land and how to regulate the housing market?

Australia has already introduced two methodologies for affordable housing. One is the assemble model and the other one the nightingale model.

The assemble model for affordable housing is a new pathway to home ownership. It is bridging the gap between renting and owning your house. With a fixed lease price for 5 years with the opportunity to buy your house at the end of the leasing period. Your home's purchase price is agreed up front. This means you get a foothold in tomorrow's housing market today, cushioning you from any rapid price increases.

Results:
Your home's purchase price is fixed giving you a set goal to save towards. Your rent is agreed up-front and is calculated at a market rate giving you stability while you save. Have the freedom to exit the lease after the first 12 months if work, life or love takes you elsewhere. After 5 years, you'll have the opportunity to buy your home and make the keys your own

In the nightingale model, a mixture of architects and impact investors put up the funds to acquire land, with intermediary financiers supporting the projects in obtaining construction finance. Land for a building is from a landowner. They invest in a nightingale building that stands for a sustainable, affordable house, high quality housing. This is important because there are no minimum design standards in Australia. Further manage the nightingale model the covenant on resale to ensure affordability is passed on.

Results:
Ecological: 100% fossil fuel free operations and minimum 7.5 star building energy rating. Neighbourhood contribution: Positive contribution to neighbourhoods via quality urban design. Financial: Capped and transparent project profits provide housing at below market price, with buildings designed to minimise the ongoing costs of operating and maintaining homes. Social: Social sustainability through building in social connection and community management.

We need a new type of affordable living in suburbia.

COLLECTIVE LIVING

In order to design dwellings for the future, it is important to question the strict distinction between private and collective spaces and activities and to get a better understanding of what can be collectivised and what needs to stay private and how participation in the community can be achieved through architecture.

Privacy

The level of privacy differs per activity, room, person, situation and can even change over time. Lots of theories describe privacy as the ability or opportunity to regulate and control the access of others to oneself. It is about the regulation of the type and intensity of stimulation, the ability to choose how, under what circumstances and to what degree one is exposed to others (Laufer & Wolf, 1977, p.37). The desired level of privacy is different for every person and every situation but is always the optimum medium between too much and too little contact with others. Both the social and physical environment can help to control the level of privacy, as social interactions are facilitated and limited by the environment. The physical factor is about adding barriers such as walls and the positioning of physical objects can help to offer private spaces (Margulis, 2003, p.419).

We need privacy to get ourselves a break from social demands, to avoid the exposure to others, to be released from the tensions and obligations of social life and to evaluate the self (Westin, 1967). When the achieved level of privacy is higher than the desired level someone experiences social isolation, loneliness and when the achieved level of privacy is lower than the desired level someone experiences too much contact. It is important to understand that there is a desired level of privacy for every situation and that the need for privacy is an individual feeling.

In cohousing projects, a balance between private and common spaces is achieved by the buffers of semi-private spaces between the common spaces and the individual units. Most of the time, in a community, various groups will be formed by individuals that have something in common.

But when is your house a home, when is the level of privacy correct. Home is the place where they feel free to be themselves and experience, the security and safety that the home and the family life facilitate and ask for (Fox-O'Mahony, 2012, p.236, Mee et al 2012, p.148). The "home feeling" is essential to a human being, although the relation between a resident and its home is difficult to define and is changed over time ((Fox-O'Mahony, 2012, p.231, Mee et al 2012, p.150).

Traditionally the home was interpreted as the place of emotional and physical security (Murphy & levy 2012, p79) and the meaning of home is formed by the psychological need for belonging, control, intimacy and identity. When there is a feeling of not at home, there is a lack of control over a space (Mee et al, 2012, p145). So, the home can be a specific place as well as a certain feeling and the sense of belonging. People are forming the houses they live in, the house contains personal memories, symbols and objects and it reflects their personality and identity (Cuba & Hummon 1993, p113, Fox-O'Mahony 2012, p236, Murphy & Levy 2012, p76)

One feels attached to a place if the place is associated with social contacts, particularly when it is shared with family and friends. The attachment between a person and a place is established by a cognitive or emotional connection one has with this place (Cuba & Hummon, 1993, p115). Thereby the social attachment, the attachment to the people that are at that specific place, is often stronger than the physical attachment. The connections between home and environment play an important role in the meaning "home" has to a person (Fox-O'Mahony 2012, p236).

The same as with privacy, it differs per person but in general women show a stronger place attachment than men and the attachment to home increases with age.

Collectivity

The level of privacy defines the amount of interaction with others and this interaction is what collectivity is about. We need interaction to evolve ourselves and we want people we can rely on. Collective living is about more than just sharing space and functions. It refers to shared responsibility, actions and efforts in the daily lives of a whole group. It promotes solidarity and cohesiveness between the residents of the created community (Ali, 2012, P617)

Nowadays the possibilities of interaction with others are endless. Social media and the mobile phone have a big share in this development. It gives us the ability to contact everyone from everywhere, whenever we want. Nevertheless, the actual face-to-face contact decreases and people only meet those who they accidentally run into.

Especially when growing older, people are seeking for more support and social contacts with others (Fromm, 2012, p372).

If the main reason for living in collective housing is affordable rent and a reduce in living costs, this will negatively influence the community life. Lots of people see already negatives in sharing functions or spaces with others. It is important to mention these benefits in order to understand where to focus on when designing.

According to Williams (2005, p200), the combination of the autonomy of the private dwelling and getting the advantages of collective living is the key reason to live in a community. In these communities, safety and security will increase, as they will notice when a stranger enters the building.

Next to the financial savings, the the environment will also benefit from a collective organisation (Williams 2005, p.222). Collective living is already a more sustainable form of housing, especially when more efficient systems are (collectively) used (Silva & Coch, 2010, p4-5).

COLLECTIVE LIVING AND THE AUSTRALIAN DREAM

The social interaction between people can be influenced by the physical environment they are in (Williams, 2005, p200). The arrangement of the physical objects in the environment influences what people do in that space. It does not determine exactly how they are going to interact with each other, but it does amplify or constrain the type of interactional possibilities (Lofland, 1998, p181). The most important aspect of stimulating interaction between residents is to offer them both the possibility to interact and to avoid this interaction. They should always have the choice between common and private space.

There are a couple design factors that could be taken into account. One of them is the informal factor. Residents who are living further away in communities tend to be more isolated than those living in the middle. There should be convenient spaces to meet, especially where spontaneous encounters take place. These places should be located amidst the various private units and in-between the private units and the common

spaces (Fromm, 2012, p370). Those transition zones are crucial for meeting and socialising with neighbours (Palm Linden, 1992, p3). As those zones are the borders between the different territories and this are the places where everyone meets. Also, the functional spaces further away from the private units, mailboxes and parking spaces should be designed attractive.

A living environment with enough meeting spaces will establish a stronger cohesion between residents. Since a multitude of small meetings will possibly trigger to organise bigger ones (Hoogland, 2000 p26).

Another factor is zoning and soft edges. Zoning is the gradual transition from the private units to the public space (Williams, 2005, p163). Those buffer zones a mentioned above ensure a good transition between private and public space and functions as a protective barrier against unwanted visitors. The different zones that can be found are ranging from private, via semi-private, collective and semi-collective to public. When leaving the private unit and the residential building one should pass all these zones in this order. The private dwelling is the first zone and the area directly attached to the unit, preferably close to the entrance, it the semi-private zone. This could be a corridor or outdoor space. Than the collective zone is the private space of a group of people, when the semi-collective zone is a space where outsiders are also able to use this space.

These various zones should flow gradually into each other and the edges should be softened. Whenever it is too bothersome to go outside or inside, it will be seen as a barrier. Besides the providing of encounters, the semi-private zones will be appropriated by the residents and they will take care of these spaces.

Important for these zones is that there is always a place where every individual from the community comes to once in a while and should function as the binding factor of the community. If these spaces are overlooked from the private dwellings this stimulates the sense of community, the feeling of security (Fromm, 2012, p369). When this semi-private spaces of the dwelling is situated on the same level as the outdoor collective area it will

blend into each other and it will increase the feeling of attachment to this area. Private units located on higher floors or further away should have a maximum visibility on the outdoor garden as this will provoke the same behavior and results.

The common spaces in a collective dwelling should be good accessible. An easy access to common rooms is necessary to encourage the use of these rooms (Williams 2003, p97). The entrance should be easy to pass through (Hoogland, 2000, p25) and easy to find (Williams 2003, p216). Thereby is a pathway an important factor. When the common spaces are visible from their walkways, people tend to enter the rooms more often and therefore interaction will be encouraged (Williams, 2003, p97).

The last factor that plays and significant role in collective living is the limitation of floors. Limiting the number of floors to avoid losing the connection between the shared spaces and private units. Too many floors will also cause a decline in the contact with the ground floor which causes this ground floor to become transit zone instead of a room to stay in (Hoogland, 2000, p19-20). Residents in their private unit who see others using s common room are more often triggered to go to this rooms as well.

PARAMETERS FOR COLLECTIVE LIVING
Collective Housing
Collective housing, like social housing, will result in a cheaper way of living. Building from a set of tools can densify places faster with a high quality. This collective housing structure makes it possible to design for a mixture between low and medium income group. Collective housing also relates back to the mass production of the historical suburban house.

Level of floors
A decent amount of floors for collective living is two or three. This is a pleasant scale and the limited level of floors for connection.

Outdoor spaces
There should be a strong relationship between outdoor and indoor living spaces which will create easy surveillance, access opportunities and a sense of space. Creating convenient spaces to meet,

passing zones and a heart for the community as binding factor. This heart should be overlooked for security. Good access to common spaces like pathways are important.

Shared facilities
As Australian are obsessed with privacy we need to be careful with shared facilities. Easy things to share are the mailboxes and parking space. Those places are good for spontaneous meetings. Using the idea of shared land result in pedestrian areas that makes suburbia more walkable.

Group Housing Sites
Mix between apartment sizes livings and housing sizes livings that contributes to a mixture in income groups in one building. More households under one roof.

Aged and youth Housing Sites 75-90m2
Housing form is the same for the aged and youth with the ability for the aged to be unmobile and for the youth to start a family. Single storey housing is preferred. Sites should be located close to neighbourhood facilities and amenities for the elderly.

Family housing Sites 120m2
Designing the same dream on a smaller site means that a smaller volume is required, therefore the dwelling becomes higher, and the site coverage is lessened. By eliminating fences, which make small sites feel excessively constricted, sight lines may pass from the street to the depth of the site.

Urban structure
The spaces between the dwelling is for public use. This space gets an infill with trees, gardens and sidewalks to provide a walkable area. Furthermore, the built and unbuilt space in this area need to have and equal distinction.

The problems of suburbia are coming from historical urbanisation. After the World War II the approaches of housing delivery changed the quality of dwelling from a sense of being in a place to one of building on a site. As the land developer took on the additional role of housing provider, the practice of house building was combined with the development of infrastructure and parcelling of land.

As we are trying to unlock the design potentials hidden in the physical structures of the suburbs, we see that the specialization of land uses of suburbia, characterized by a "weakened sense of community". A tendency for social life to become 'privatized' and a reduced feeling of concern and responsibility among families for their neighbours. The criticism on the suburbs should be directed not at detached housing but at its volumetric structuring, which minimizes ways of sharing. A volumetric approach to housing emphasized the house's perimeter as a separation between public and private as well as interior and exterior space.

Starting of from this theoretical view, the new model for suburbia lays in the redesign of its volumetric structure, rather than independent orders for house and site. The attributes of dwelling should be structures between inside and outside, from space to space, beyond the limits of any house. A new model should organize relations among houses and sites as collective and should organize individual actions as collaborative.

What could a new model for suburbia be? Because of the low dense development patterns of the suburbs, a new model allows the suburbs to densify in a form of collective housing. Collective housing in the sense of giving the community the opportunity to shared facilities together with its careful combination of separation and connection to the collective and private life. Larger groups of buildings shared the landscapes offer different social possibilities. A large ensemble of dwellings forms a mini-city within the suburb that can evolve a tangible sense of identity through shared values and behaviours.
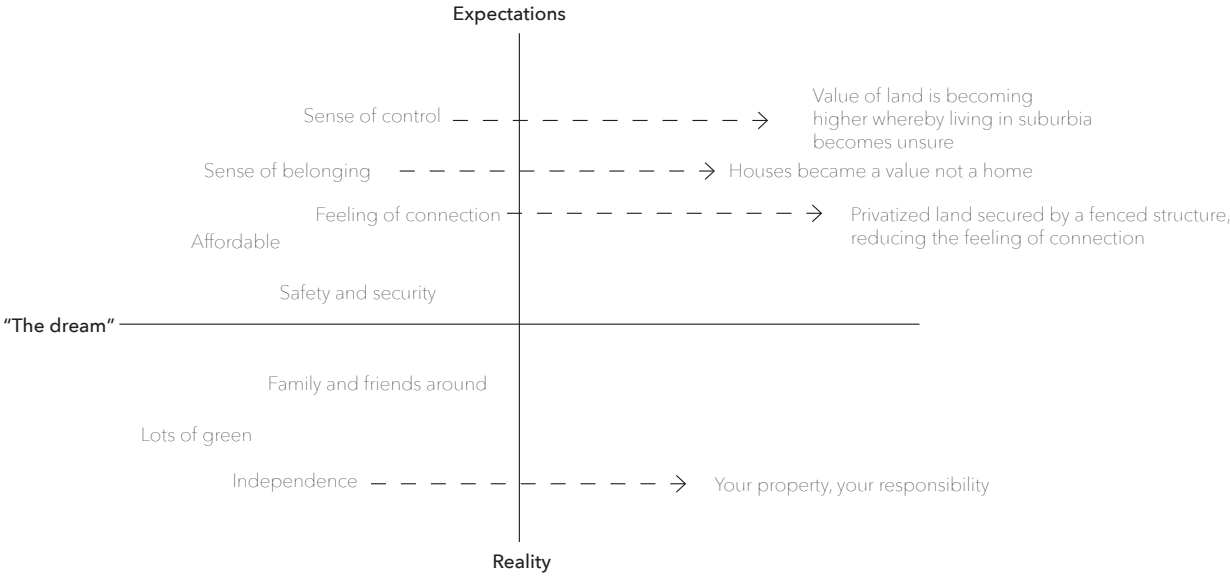
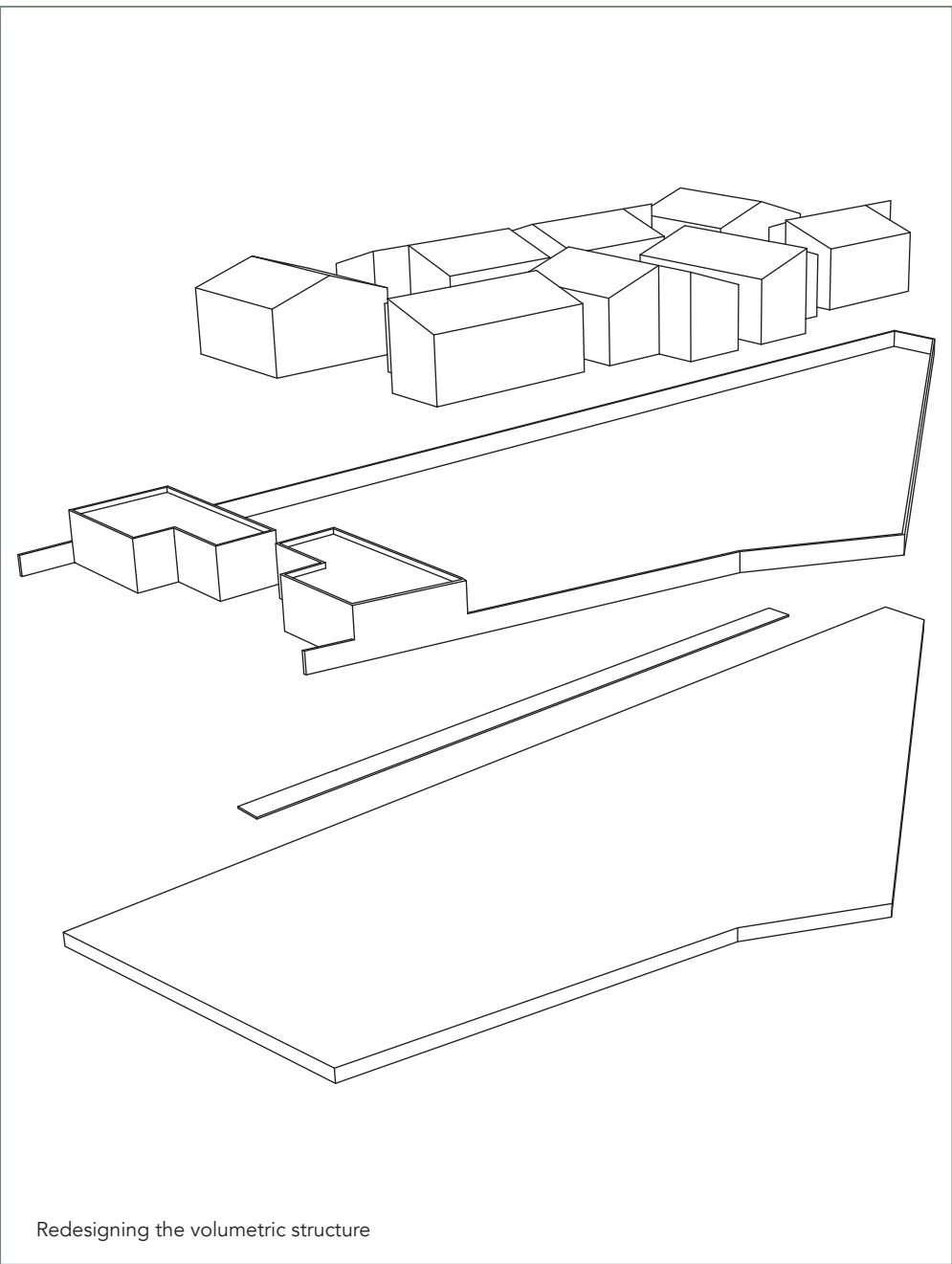The new model in my eyes is an unique kind of suburb life. A combination of the conceptual characteristics of a freestanding house culture together with a more collective way of life. This unique kind of suburb life investigates the relationship of building and room to the garden. Creating an informal and familiar environment by the use of recognisable elements. The aim is to work out a generic model for suburbia but this is always in stress with the possibilities of the plot. An applicable model will be defined by the methodology, typology and technology that can be applied elsewhere.

So, the urban sprawl of the suburbs in Melbourne can become the most vibrant residential areas where the new domestic requirements can be met. The new model will be the future answer of the problems suburbia is facing. The new residential area being developed which consist of more individual dwellings similar to the scale of the suburbs, with more households under one roof, approximately two times as dense. The livings will be private with each their own entrance giving it a sense of ownership, important related to the Australian Dream and the space between the dwelling will represent a new way of boundaries between private and collective space.

To conclude, suburbia was supposed to be a place to have a house of your own where one can raise a family in conditions that are ideal, a place without limits. As soon as the private housing sector became the dream. Strict division of land contributing to this made an end of the place that was idyllic.

The sense of control, the sense of belonging, feeling of connection, affordability and safety and security are qualities that seems to have disappeared when years pass and people found they were not living in the dream world, but living in a dream",
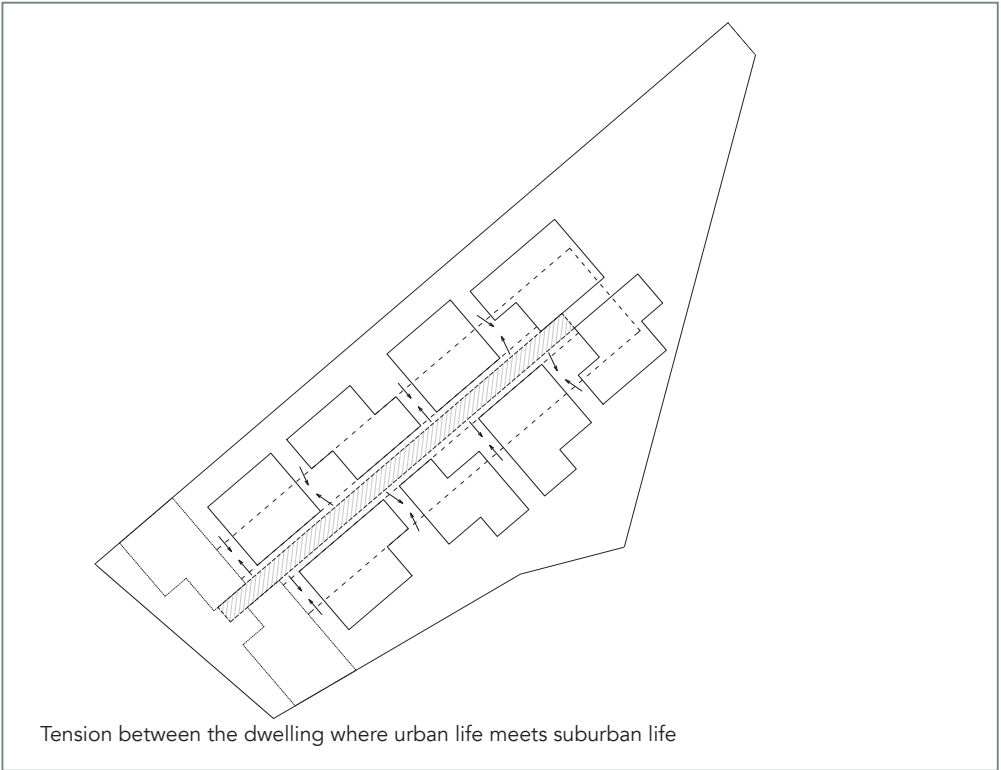
Expectations

Sense of control — — — — — — — — — → Value of land is becoming higher whereby living in suburbia becomes unsure

Sense of belonging — — — — — — — — — → Houses became a value not a home

Feeling of connection — — — — — — — — → Privatized land secured by a fenced structure, reducing the feeling of connection

Affordable

Safety and security

"The dream"

Family and friends around

Lots of green

Independence — — — — — — — — — → Your property, your responsibility

Reality

URBAN ATTRIBUTES

Attribute: Inner lane development
Benefit: Communicative place in the city, this more unofficial city inside the block are now a rich social environment hosting little bars, boutiques and cafes. An environment where staying or sauntering is allowed. It became a social meeting place in the crowd of the city on human scale

Attribute: Urban facilities
Benefit: They could benefit from urban qualities such as closeness, contact and common facilities being more self sufficient

Attribute: Density
Benefits: Density is a tool to design an environment that can regulate different approaches such as social interaction, social control, safety and

SUBURBAN ATTRIBUTES

Attribute: Scales of the dwellings
Benefit: Keeping the spaces where Australians are familiar with

Attribute: Do-it-yourself culture
Benefit: Freedom, quality to be limitless in the urban sprawl of the city

Attribute: Green environment
Benefit: Healthy place to grow up your children, place away from the crowd. A place based on the notion that space available for possession, development and ownership is limitless.

Redesigning the volumetric structure

Tension between the dwelling where urban life meets suburban life

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IDENTITY IN DENSITY

OUTSIDE THE BOX

A strategy for the
dencification of suburbia