REVITALIZING THE PUBLIC SPACES IN LANDLUST
An experimental approach to revitalize the positive vibes in the public spaces of Landlust by integrating circulation routes with green spaces

Research Report
Vienne Ma 442413
PREFACE

Shortage of housing is knotty, yet global. Climate and comfort are evitable issues to deal with. On the other hand, some buildings possess high historical, cultural and aesthetic values that demolishing them is not a wise solution. These struggles lead to a strong urge of transforming old buildings into sustainable ones without destroying all existing elements completely. This report consists of the research of the housing monument in Landlust. The question is how to determine which elements in Landlust should be remained, modified and replaced. This research report comprises the study of the architectural design, cultural-historical values and building technology of Landlust and their changes over time. The research results provide solid reasons in making decisions in the design process at the next stage.

November 2015
# TABLE OF CONTENTS

## Chapter 1: Introduction

- Graduation Studio
- Site Introduction
- Choice of Location
- Architects
- Problem Statement
- Research Question
- Research Method

## Chapter 2: Building Analysis

- Introduction
- Morphology
- Monumentality
- Aesthetics
- Interior
- Building Technology
- Materials
- Building Services
- Conclusion
Chapter 3: Research on Public Spaces

Methods and Definitions
Theories on Public Spaces
Criticism of Public Spaces
  - Lack of Surveillance
    - Isolation of the site location
    - Boundaries around the courtyard
    - Disappearing eyes from above
  - Spaces for Social Contact
    - Contact or privacy
    - Public greeneries
  - Missing Layers of Public Space
    - The mapping of existing functions
    - Changes in functions over time
  - Circulation and Movement
    - Routes from private dwellings to collective spaces
  - Safety in Circulation Routes

Conclusion

Chapter 4: Statistics and Policies

Significance of the Data
Origins of Residents
Cultural Habits of Immigrants
Population and Age Groups
Safety Index
Income and Households
Urban Parks
Future Policies of Gemeente Amsterdam

Chapter 5: Design Research

Reflections and Starting Points for Design
Design Goal
Design Variants

Chapter 6: Inspiration and Built Examples

Inspiration Images
Built Examples
Plants in the Netherlands

References

Appendix
INTRODUCTION
Graduation Studio

My motivation to enrol in this graduation studio is because of my interest in reuse and transformation of existing buildings. I have a passion for old buildings. I always enjoy visiting monuments and other heritage when I travel to different cities in the world. Old buildings are attractive to me not only because of the texture of the bricks and stones, but also the historical layers they reveal and the stories they tell. Being a student from Hong Kong, I am used to live in a modern city with rapidly changing environments. Most people live in modern high-rises built in concrete and glass. Old buildings are always demolished completely due to economic reasons and complicated procedures for preservations. The values of historical buildings are seldom taken into account. During family trips in Europe in recent years, I saw many examples of the mixing of old and new elements in a building. I appreciated the conflicts and balances between them. I want to try to tackle with the numerous challenges in restoration projects - to preserve and transform old buildings for present and future demands. Thus, I choose this studio Heritage and Architecture (formerly RMIT) without hesitations.

Last year, I did a project on the renovation of a soda factory in Schiedam in this studio. It was an interesting experience as I started to learn more about the difficulties in the design of restoration projects in particular the cultural-historical and technical aspects. This year, I want to work on a different building type. I am attracted by the topic Housing Heritage Amsterdam. I want to explore innovative methods to intervene a housing monument in a modern and sustainable perspective while keeping its important cultural-historical values. The site of my project is a municipal monument located in Landlust in Bos en Lommer District, Amsterdam-West. It has been a social housing for minimum income households since 1936. Since shortage of housing is a global problem in many cities, it is a very meaningful task to transform old buildings into sustainable ones instead of start everything from scratch. I believe this project will allow me to find out appropriate solutions to restore housing heritage.

The configuration of this housing complex in Landlust is based on the idea of community and equality. The site of my project consists of two building blocks of four levels and one block of one level houses. Many existing housing in the Netherlands process similar building form. Thus, I think finding a way to improve this housing monument in Landlust is not only beneficial to this particular project, it is also useful in coming up with a more generic solution for dutch housing. The design motto for this housing monument was Light, Air and Space. The building blocks are surrounded by greenery. I think it has a great potential to be transformed into a very nice neighbourhood after restoration. I understand the urgent need to renovate this housing as I am currently living in a building with similar settings in Rubroek in Rotterdam built in 1941. I like the environment and surroundings of my home but I also see the possibility to enhance it further. The technical issues and climate control in the housing built in the pre-war period are not up to nowadays standard. This type of mass-produced housing has to been renovated into sustainable housing that fits the current and future needs. Therefore, I hope that the outcome of my final graduation project will help to accomplish my strong attempt of providing substantial solution to improve the housing monument through preservation and transformation.
Site
Historical Development

**Amsterdam-West from 1900**
Amsterdam-West was an ancient dike village Sloterdijk until the 19th century. Before urbanization, Sloterdijk was a rural area with some country houses and farms. In the late 19th century, industrial revolution started. New museums, train stations, infrastructures, suburbs were built in Amsterdam. Due to increasing population and wealth, city expansion started in Amsterdam in the 19th and 20th century. Electric Railway Company built the railway station Sloterdijk in 1904. Then, the tram line running on Admiral Ruijterweg was built, connecting the northwest and southeast side of Amsterdam West. This marked the start for city expansion in Amsterdam West. The buildings and polders were built along Admiral Ruijterweg around 1910. (fig 8-1) Around 1925, there was a large urban development with Amsterdam School architecture on both sides of Admiral Ruijterweg. The development of the land at the rear sides of Admiral Ruijterweg only started after the implementation of the General Expansion Plan in 1930. (Gemeente Amsterdam, 2014)

**Time Line**
- before 1800, Ancient dijk village Sloterdijk
- late 1800s, City expansions started
- 1900, Station Sloterdijk and tram along Admiral Ruijterweg was built
- 1910-1925, Amsterdam School architecture was built along Admiral Ruijterweg
- 1930, Expansion of Bos en Lommer (General Expansion Plan, 1935)
- 1936, Landlust was built
- Intervention after second world war

*fig 8-1. Public Works of Amsterdam-West, 1922 (Gemeente Amsterdam, 2014)*
Development plans of Landlust
In 1928, the Planning department of the Department of Public Works was founded. The chief urban planner of Public Works was C. Eesteren. In April 1929 he presented a schematic plan for the further development of Amsterdam-West, including the planning area of Landlust bounded by Jan van Galenstraat, Westelijk Marktkanaal, Haarlemmerweg and Admiral Ruijterweg. Besides homes, the plan included a business park for small-scale industry and the grounds for the Central Market Halls. After several revisions, the plan was established in 1931. He established the General Extension of Amsterdam (AUP) in 1935. Landlust was the first detail development plan of the AUP.

Western Garden Cities - Motto of Light, Air and Space
Influenced by the garden city idea, the highlight of the development plan of Landlust was a new perspective on living, expressed in the motto: Light, Air and Space. The idea of the General Expansion Plan in 1935 was to include a large amount of green open spaces with gardens and parks between residential blocks. The Planning department reserved more spare spaces (5.1 instead of 2.5 percent) for the intensive use of parks, squares, cycle paths and bicycle parking and much wider street profiles (40 instead of 26 percent). The urban plan for the site had been revised for a few times. At last, the plan of traditional closed block had been replaced by row housing in 1933. (Gemeente Amsterdam, 2014) (fig 9-1&2)
Choice of Location

The site of my project is in the neighbourhood of Landlust in Bos en Lommer district in Amsterdam-West. Landlust is the area between Jan van Galenstraat, Westelijk Marktkanaal, Haarlemmerweg and Admiral Ruijterweg (fig 10-1). The black line (fig 10-2) shows the area of focus in my project (site), i.e. the building block between Juliana van Stolbergstraat and Louise de Colignystraat. The building was one of the experimental row housing in modern urban planning idea. The buildings were built in 1936. They are now on the status of municipal monument. Renovation plans are in progress.

Bos en Lommer is a diverse and family-oriented neighbourhood which has been revitalised in recent years due to its relatively central location and urban greenery, which made it attractive for redevelopment. Bos en Lommer is currently under re-development in trying to deal with the immigration gulfs and increased traffic that the original plans did not anticipate. It also receives national funding to improve infrastructure and general liveability. (Gemeente Amsterdam, 2014)
Architects

The architects of the site in Landlust were Ben Merkelbach and Charles Karsten.

Merkelbach was born in Amsterdam in 1901. He was educated at de Haarlemse School voor Bouwkunde. He gained practical experience at an architectural firm in Haarlem, where he became a draftsman at the renowned Dutch architect and designer Mart Stam. He assisted in the district Hellerhof in Frankfurt, now a monument of early social housing. Back in the Netherlands he became a founding member of the Amsterdam architect group’s eight. He was promoted the Modern Movement in the Netherlands that the movement rejected ornamentation and promoted form follows function. Merkelbach was initially secretary. In 1934 he took over the presidency from Jan Duiker. Merkelbach felt very involved in the social turmoil and had therefore been dealing intensively with social housing. His passion was primarily to improve the living and working conditions for workers. He analyzed in detail the activities of workers in their homes - how they dried their laundry, where they left their trash, how they docked their bike - and based upon his designs. (“Benjamin Merkelbach,” 2015) He also included more squares and communal gardens into neighborhoods. As an architect he worked from 1929 to 1949 along with Charles Karsten (1904-1979), then from 1949 to 1955 with Piet Elling. In 1956 he was appointed City Architect of Amsterdam. (“Ben Merkelbach,” n.d.)

Karsten was a Dutch architect and sculptor born in 1904. He was also educated at de Haarlemse School voor Bouwkunde where he met his future partner Merkelbach. He retired in 1949 to devote himself to art. (“Charles Karsten,” n.d.)

Merkelbach and Karsten were college friends. In 1927, together with six other architects, they founded De8, the group of New Objectivity in Amsterdam. The first major project of their office was the expansion of Landlust in Amsterdam-West. Their most known works were the AVRO studio in Hilversum and the district Landlust in Amsterdam. They became famous for breaking the traditional closed blocks with open row housing in Landlust in 1933. In 1936, the AVRO studio completed in Hilversum. This fan-shaped building was the first in the series of buildings, which the pair gained much fame. After the war (1947-1951), they designed the 800 duplexes Frankendaal, a suburb with L-shaped building around green courtyards. The factory of De Vries Robé in Gorinchem (1941) and the expansion of foundry Tetterode (Amsterdam, 1951) are two other famous works. After Karsten retired to devote himself to being an artist in 1949, Merkelbach became partner with Piet Elling. The collaboration continued until 1956, when Merkelbach until his death devoted to the city building mastery of Amsterdam. (“Bejamin Merkelbach,” 2015)
Problem Statement

The housing monument in Landlust was built in 1936, designed by Merkelbach based on the Western garden cities idea. With the design motto ‘Light, Air and Space’, his goal was to incorporate strips of green in between building blocks for recreational and leisure purposes. The streets in front of the building blocks were planted with trees and grass. The courtyard between two adjacent buildings was designed as parks and communal playgrounds for children. (Rebel, 1994) These public and semi-public spaces were once the merits of the complex in the 1930s. Later, these green spaces started to deteriorate over time. The positive qualities of these spaces are no longer appreciated by the residents nowadays. Is this caused by the flaws in the original architectural design of Merkelbach? or is it affected by the changes in social concepts or modern technology? What other reasons could have led to the gradual deterioration of the public spaces?

Now, this housing monument has the opportunity of restoration. As suggested by the Bureau Monumenten & Archeologie (BMA), the public space is one of the most important factors to take into account at renovation. Special strategies are needed in the handling of the green as an integral part of the street profiles and public space. (Gemeente Amsterdam, 2014) Thus, I would like to focus on the public space of the site in my project. First of all, it is crucial to study the advantages and problems in the public space of the existing site and then to find out the appropriate solutions to meet the current and future demands. The public space should not be considered as separate outdoor space but rather a continuation of the private dwelling to the collective space, as well as an integrated landscape of communal garden and street profiles.
Research Questions

Main Research Question
What are the strengths and weaknesses in the design and use of existing public space in Landlust in relation to its historical and cultural significance? How can the characteristics of the public space be preserved and enhanced in the future design for different target groups?

Sub-research Questions
1) What are the important characters of existing site to be preserved/removed?
   - studies of the social and cultural significance of items at different scales
   - aesthetics and atmosphere
   - analysis of the original and existing building system
   - value assessment

2) What are the pros and cons in the public and semi-public space in the site?
   - analysis of the site location and its relationship with the surroundings
   - the building form, circulation and accessibility
   - the connection of private dwelling and public space
   - the past and current functions of public space
   - the transformation and changes through time
   - the effect of different materials

3) Who are the target users? Who will live in the site after renovation?
   - the distribution of age and ethnic groups in the existing site
   - the potential future users, i.e. existing residents or newcomers
   - the current and future needs of the target users

Research Goal
By gathering the results of the research, the advantages and disadvantages of the public space in the site are discovered. The results will reflect the aspects and the respective locations that should be remained or improved. The analysis of specific needs of potential users is important in the value assessment. The evaluation of public space in Landlust is the combined conclusion of the research on architectural design, cultural-historical values, societal needs and building technology. The next step is to find out the appropriate solutions to deal with the existing conditions, whether something should be preserved, modified or replaced.
Research Report (P1)

- Observations through site visits
- Theories planning of public spaces
- Statistics & Policies from Municipality of Amsterdam
- Historical Records (mappings, diagrams, photographs and drawings)

INPUT

Analysis of the building blocks

Value Assessments of qualities to preserve or demolish

Characteristics of existing public spaces (mappings, diagrams, photographs and drawings)

Possible Solution 1
Possible Solution 2
Possible Solution 3

Design Research (P2)

Case Studies for possible solutions of public space

Conceptual Design (P2)
urban plan, floor plans, sections, impressions

overview of my research process
Research Method

To solve the research questions in an integrated approach, my analyses are based on the three research categories stated by the department of Heritage and Architecture.

My research starts with the analysis of the site and the surroundings through the study of old maps and historical records from City Archives and sources from Van Eesterenmuseum Amsterdam. Chapter two is the analysis of the site, the building blocks and the dwellings. Some importance sources included the historical photographs from City Archives and reports from Gemeente Amsterdam. Historical studies and policies assist me in the assessment of cultural and historical values of the site. They act as essential guidelines for me in making decisions to preserve or demolish existing features in Landlust. The structure of the value assessment is explained at the beginning of the second chapter. At the conclusion, a value assessment is made.

Chapter three is the core of my research which is to find out the merits and problems of the existing public space in the site based on my observations and assumptions, and the theories of architectural historians, architects and urbanists who have commented on the planning policies of modern architecture and the decline of public space caused by modern architectural ideologies. These theories which described the common problems are useful in the reflection of the problems in Landlust. Although there are limits in the relevance of these theories because of the difference in context and time period, the viewpoints of the authors can still be applied to the Landlust especially on the relationship between the private and public space. Jane Jacobs’ ‘the Death and Life of Great American Cities’, Richard Sennett’s ‘the Fall of Public Man’, Michael Sorkin’s ‘Variations on a Theme Park’, etc wrote about the public space in different perspectives. Jacobs was concerned with how urban planning and architecture would affect the safety and uses of public space. Sennett wrote about the changes in human behaviour affected by the built environment through time. Sorkin explained the effect of privatized public space. Le Corbusier stated the need of recreational functions in public space. I use these theories to clarify the possible reasons for the existing situations of public space in Landlust. This part includes the study of the current and past situation of public space in the site, as well as the changes over time. The study is conducted by comparing historical photographs and present situations, reading the original drawings of Merkelbach, cultural history report by Gemeente Amsterdam, etc. It also includes the analysis of the building technology and cultural values that concerned about the public space of the site.

In order to determine if the affairs happening now in the public space of Landlust are indeed good or bad, I use the information regarding Landlust in the report of the future plans for Bos and Lommer Area provided by Gemeente Amsterdam and the report of the culture history of Landlust provided by Bureau Monumenten & Archeologie (BMA) to have insights about the things that needed to be improved in the future. The reports also include the current technical and social problems in Landlust and suggest possible solutions for the communal spaces in Landlust. With the references of these reports and the study of the theories, I could evaluate the public space of the site in architectural perspectives. The results are categorized into pros and cons in the conclusion of the chapter.

In chapter four is the study of the demographics and program of Landlust in the past and present days. This part focuses on a larger scale where more of the site surroundings are studied. The results are useful in the understanding of the needs of existing and potential residents and are essential in finding the appropriate design solution.
BUILDING ANALYSIS
This chapter includes the study of the site. The building analysis covers different scales from urban scale to details. Value assessment is made based on the scheme (fig 17-1) made by Professor Paul Meurs and the selection criteria for a protected monument stated by Gemeente Rotterdam. At the end of each part is my personal interpretation of the values. I form the three major categories in which they are directly linked to my research topic, i.e. Public spaces, Semi-public spaces, Private spaces. Public spaces refer to the biggest scales including Bos aen Lommer, Landlust and public streets in the urban block. (Morphology) Semi-public spaces refer to the outdoor and indoor spaces that are shared and used by residents of two or more households, which includes mainly the courtyard and staircases and other matters related to the building block. Private spaces refer to all things within a residential unit. (Monumentality) The study of non-architectural items and other information that are useful for the research will be covered in Chapter four. (Mentality)
Site Analysis

Morphology

The whole site complex was designed based on Western garden cities idea. It was a new experimental development plan of Amsterdam West by the Department of Urban Planning of van Eesteren in 1929 that half-opened building blocks were used instead of the closed blocks. The change of the building form was innovative at that time. Landlust was the first part of the AUP which was developed in detail. It marked the turning point in history that strip housing is used in Amsterdam instead of the tradition of closed block housing. (Uitbreidingsplan Landlust, 2014)(fig 18-1&2) The morphology of the site was innovative but it was not the only example of strip housing in Amsterdam in 1930s. This type of morphology becomes very common in the Netherlands nowadays. Thus, the historical values of the building footprints are high but the cultural values are low.

Location

The location of the site is hidden behind the long block on Admiral Ruijterweg which is a historical evidence of the development of Amsterdam-West that the urban development began along Admiral Ruijterweg. It is also a good quiet zone for residential. Also, the site has a good transportation network. The site is in closed proximity with the trams and is within short distance to Amsterdam Sloterdijk station and Amsterdam city centre. (fig 18-3) Thus, its location has high historical and cultural value.
Green
The site is surrounded by grass and trees. The idea of the AUP was to include strips of green in Landlust in order to maximize the amount of green space in the area. (Gemeente Amsterdam, 2014) (fig 19-1) There is no specific reason for the orientation, size and dimension of the green space. The choice of tree planting and planning of park was crucial on prominent places in the public space only. Monumental trees are found on the wide traffic lanes but small trees are planted in the residential streets, i.e. the streets around the site. (Gemeente Amsterdam, 2014) The integration of green in residential blocks has high historical and cultural values, as well as high architectural and aesthetic values.

Fig 19-1. Transport Network
**Building form**

The building form of the site was innovative in Amsterdam in the 1930s. The plan consists of two strips of four floors over a basement with storage rooms. The building blocks on Juliana van Stolbergstraat and Louise de Colignystraat formed a pair since they faced opposite to each other with the living room facing the street and bedrooms and kitchen facing the courtyard. (fig 20-1&2) All living rooms are west or east oriented like the traditional closed blocks on the street. This is contrary to the ideas of the new row housing that the living rooms all face the west. (Uitbreidingsplan Landlust, 2014) This is also an evidence that the site is built at a stage of transition from closed block to row housing. The building form has high historical and architectural values.

**In-between road**

The building blocks were split on ground floor near the end on Willem de Zwijgerlaan for cars to pass through. (fig 20-2) This made the houses on that side separated from the central courtyard. There was no evidence from historical records of why Merkelbach placed the road in that way to disturb the silence in the courtyard. Although the road allows a continuous traffic road within the urban block while separating the traffic from the main busy road on Willem de Zwijgerlaan, it has segregated the dwellings at that end with the rest of the building blocks. Thus, this road has low historical and architectural values.
Building Analysis

Monumentality

Split level
The use of split level in mass-produced social housing was new at that time. The ground floor is raised half level above. (fig 21-2) The storage space was moved from the attic to the basement so that the basement was built on the lower ground level. (Uitbreidingsplan Landlust, 2014) (fig 21-1) The design of four levels of housing above the basement became common in the Netherlands. (fig 21-3) They have high historical values but low cultural values.

![fig 21-1. basement plan](image1)

![fig 21-2. storage space at the basement](image2)

![fig 21-3. Merkelbach’s drawing of split level for a competition, 1934 (Rebel, 1994)](image3)
Circulation
The circulation in the public space of the site is one of the major problems to be solved. As discussed in previous chapter, in the past the two gates on Willem de Zwijgerlaan and Bestevaerstraat were opened to public access during daytime. The access to the courtyard is only through the back doors nowadays. This created a deadend on the side near Bestevaerstraat in which according to research on design of public space, it is a disadvantage to the complex. The direct routes from public street to the courtyard were also blocked completely nowadays. Residents in the dwellings near the end of Willem de Zwijgerlaan cannot enter the courtyard through their backdoors. (fig 22-1) The circulation routes have already changed over time. The value of circulation route of the original design is low. Also, since the circulation of the original design does not match the current use anymore, it is not reasonable to keep it. The complete circulation in the public space of the site should be improved.

Building Analysis
Monumentality

The route from public street to private dwellings is through the internal staircases. (fig 22-2) Each staircase is shared by eight families and each stair is shared by four units, at alternative floors. (Uitbreidingsplan Landlust, 2014) This provided the residents with sufficient privacy but it also restricted the encounter with other neighbours. It is unique in this project that each stair only leads to two floors whereas other projects in Amsterdam West have each stair leads to four floors. (Uitbreidingsplan Landlust, 2014) The stairs include a small roller elevator for residents to transport their groceries. It is still being used nowadays. (Ymere)(fig 22-3) The specially designed staircase and the roller elevator have high historical values but low architectural values because of the problems they caused. (to be discussed in the next chapter)
Typology
The site contains 208 dwellings. The overall typology of the site has not been changed from built until now. The site has two major types of dwellings on the side (highlighted in red in fig 23-1), one with two bedrooms and the other with three bedrooms. (fig 24-1) Other dwellings are the variation of these two typical types with slightly different dimension and area. These two typical types always appear in pairs so that the pipes in the toilet and the fire place and chimney in the living room can be built together at the same location for two dwellings. (fig 23-2) The original drawings from Merkelbach show the typical plans on the second floor of the site. The floor plans of two long building blocks on Juliana van Stolbergstraat and Louise de Colignystraat are opposite to each other. As mentioned before, the facing of two blocks has a high historical value because it marks the transitional change from closed blocks to row housing. The symmetrical plan should be preserved in the future design.

There are two exceptions to the two typical dwelling types, i.e. the four one level houses on Bestevaerstraat and the units located at the ends of every floor on Willem de Zwijgerlaan (highlighted in green and blue respectively in fig 23-1). The four elderly homes on Bestevaerstraat are different in orientation with the rest of the dwellings. Each of the four houses has a individual entrance on the ground floor and direct access to the courtyard from their homes. (fig 25-2) These homes act as a visual and physical boundary between the public street and the courtyard. It has indirectly affected the circulation and function of the public space as mentioned in previous chapter. Thus, these houses have a high cultural value but low architectural values because their existence contradicts with a good design of public space.
fig 24-1. Typical Plan

fig 24-2. End of building block on Louise de Colignystraat
Another exception is the units at the ends of building blocks. At the ends on Willem de Zwijgerlaan, both units have a square balcony and additional windows at high level in the kitchen. The central hallway in both units has a different shape than the rectangular hallway in the typical units. The fire place of both units is also placed at a different location. The most significant difference is that the units on Louise de Colignystraat (fig 24-2) and Juliana van Stolbergstraat (fig 24-1) have the same direction instead of facing opposite to each other. As mentioned above, the floor plan of two building blocks are symmetrical. In the typical units, all living rooms face the street while kitchens and balconies face the courtyard. Therefore, the case is special not just because of the internal layout but also the external appearance of the building blocks, especially on the Juliana van Stolbergstraat where the whole building block is covered with bricks and glass windows only. This special corner should be taken into account in the future design of the facade but since the material of the balcony has been changed in the past and this special design does not reveal any historical context of the site, it is not necessary to keep the exact appearance of this corner.
Facade Pattern
The facade pattern is the reflection of the types of unit behind the facade on all sides. (fig 26-1-4) The pattern is affected by the floor plans of the building blocks. The rhythm in the middle part of the building block is a repetitive pattern. The two ends are more special which is also the result of the dwelling type behind them. In the future design, the facade pattern should also be determined by the floor plans. Thus, the architectural value of this repetitive pattern is low.

Additions
Except the original design of the facade, the appearance of the building blocks is also affected by the things hanging out by the residents. The look of the building blocks changes over time. In the past, residents used their balconies very often and the balconies are more transparent. The facade facing the courtyard was affected and changed constantly by the clothes hanging in the balcony. (fig 26-5) Nowadays, the balconies are used less. The lower part of the balconies are covered.
with the fabric with flower pattern. (fig 26-6) The facade looks monotonous and the blue fabric did not match the overall beauty of the building. It made the building look old and dirty. Since the balconies have been modified in the past, they are no longer authentic. The historical values of the appearance of the balconies are low.

In the 1930s, the building blocks are not equipped with television receptors for the low-income families. Later, televisions become common and people start to hang satellite discs on the facade next to their windows. (fig 27-1) The facades facing the streets used to flat without anything hanging out when it was built. (fig 27-1) Although the satellite discs destroy the smooth appearance of the external wall, they have been functional. Nowadays, digital television acceptors are used. The satellites should be removed to return the facade to the original state.

**Greeneries**

As mentioned in the General Expansion Plan, 1935 by AUP, there was no room for a real park in the expansion of Amsterdam West. Therefore, it was decided that parks were to be integrated into green street profiles. The greenery in public space was assigned to provide recreational activities such as seating and playgrounds. (Gemeente Amsterdam, 2014) Thus, strips of green is the idea of the whole project. It also affected the aesthetics and atmosphere of the site. Plantation and gardens were found on the street and courtyard. (fig 27-2) The greeneries have been kept until now. (fig 27-3) Since the green strips were the core concept of this housing heritage and the amount of green present in the site has not been reduced from built to now. Therefore, the green in the site has very high cultural and historical values. The integration of green into the street and the whole housing complex should be well-preserved.

![fig 27-1. satellite discs on the facade, now](image1)
![fig 27-2. courtyard, 1953 (Beeldbank, 2015)](image2)
![fig 27-3. Juliana van Stolbergstraat, now](image3)
Building Analysis

Interior

Unit Plan
All dwelling has separated toilet and shower room. The shower is located next to the kitchen so the shower was equipped with hot water from the boiler in the kitchen. The kitchen was decorated according to the principles of rational kitchen developed by architect Janzen, inspired by the famous Frankfurter kitchen. The idea was that all things including gas stove, sink, countertop, closet could be controlled from one position in the kitchen to save time. It was designed for the ease for the housewives in the past. (Uitbreidingsplan Landlust, 2014)

The overall layout of a dwelling has not been changed from built until now, including the structural and non-structural elements. (fig 28-2&2) However, most residents have renovated the interior of their dwellings a few times to meet their needs nowadays. The rational kitchen has lost in most of the dwellings and is replaced with modern settings now. (fig 28-3&4) Moreover, due to the fact that the shower room is placed in the middle of a dwelling and it is 1.7 metres away from the load-bearing wall, the wooden beams in the shower room are bend already. (to be discussed later in the session of building system) (Ymere, 2014)

To conclude, the plan of the dwelling has a higher historical value than the interior decoration because the plan is more or less the same as the original design. The interior of a dwelling has a very low cultural-historical value because on one hand it is not longer authentic and on the other hand it is not unique in the Netherlands. Therefore, the interior decoration of the dwelling can be changed completely at restoration whereas the plan of the dwelling should be preserved in a flexible way. The extent of preservation of the plan should negotiate with the future design and building technology. Especially Gemeente Amsterdam wants to put one third of the dwellings on sale in private market, the dwelling size is too small for future needs. If necessary for the future design, the plan does not have to follow the original design strictly.
Fireplaces and Chimneys

In the 1930s, there was no central heating. Fireplaces and chimneys were needed to provide heating to the dwelling. (Uitbreidingsplan Landlust, 2014) Due to modern technology, fireplaces were no longer needed and many dwellings have had their fireplaces removed. (fig 29-4-5) If the chimneys are removed, it is possible that thermal bridges might be caused. The chimneys also form an integral part with the building system. (fig 29-3) (Ymere, 2015) The fireplaces have a high historical value because it is once an essential element of a dwelling in the 1930s and they affect the appearance of the building blocks. (fig 29-1-2) The dilemma is that most fireplaces are not authentic in the interior, they occupy space in the dwellings and they do not fit the interior of the modern homes but they are important elements on the facade.

fig 29-3. Structures and location of fireplace, original drawing of Merkelbach, 1936

fig 29-1. Rows of chimneys, 1976 (Beeldbank, 2015)

fig 29-2. Chimney at the facade, 2015

fig 29-4. Fireplace in the living room, 1938 (Beeldbank, 2015)

fig 29-5. Fireplace has been removed, 2015
Building Analysis - Details

Building Technology

Structures

The construction method of the foundation in the site is common in Amsterdam. Long timber piles are dug deep into the soil. (fig 30-1) Since there are no structural problems caused by the foundation, all timber piles should be kept in place. The building block is constructed with brick masonry, wooden beams and steel frames. All the load-bearing walls and the facades are constructed of bricks. The floors are supported by wooden beams. (fig 30-2) Steel frames are used to support the wall openings above windows and doors. (fig 30-3-6) All these elements are still the original ones and they are still structurally sounded except the wooden beams in the shower room (to be discussed on the next page). They have high historical values. The brick masonry should be preserved because they are the major materials in the building blocks and they determine the appearance of the building. But the rusting of steel work are found. These steels should be replaced to avoid further damages. It is difficult to replace the steel without damaging the facade and the bricks because the steel beams are covered with bricks. The bricks have to be removed before the steel can be replaced.
Floors and Walls
The floors are supported by wooden beams and made of wood. The ceiling is a suspended ceiling supported by wooden beams and covered with reeds and plaster. (fig 31-1-2) All existing elements are the original ones. They have a high historical values as they reveal the construction method and materials in the 1930s. However, the materials of the floor and ceiling are not fireproof and sound proof. They are also not good for insulation. The existing floors and ceilings are thin to install insulation. The height of the existing interior is 2.01 metres which is very low for new installations of services and insulation layers. That might make residents feel uncomfortable. It also does not comply with present building codes. Some of the wooden floors have cracking and bending. The bending of wooden beams is mainly due to the weight of the shower room that is located in the middle of the house and is 1.7 metres apart from the load-bearing brick masonry. (fig 31-2) Therefore, they should be replaced or upgraded.
Building Analysis - Details

Materials

Partition walls
The non-load-bearing interior walls are constructed in lightweight building block, finished with stucco, with a total thickness of 70mm. The original layers of stucco on the interior partition walls are damaged. The wall finishes have to be repaired. Some parts of the partition walls are also torn down. (Ymere, 2014) (fig 32-1) The partition walls have lower historical values than the brick masonry and they are difficult to repair. The internal walls have low historical and technical values.

Doors of the building entrance
Steel door frames at the entrances of the building blocks were used on both the streets and the courtyard. The historical photos (fig 32-3&4) show that steel doors were used in 1936. Present photos (fig 32-2&5) show that the doors are no longer the original ones. Therefore they have no historical values.

Doors of the dwellings
The existing doors for the dwellings do not meet today’s fire requirements. The doors also bring in a lot of noise from the stairwells to the homes. The existing wooden floor requires new insulation and levelling screed which will take up at least 30mm. Then the existing doors would not fit. Also, the existing door frames deform because of the deflection of the floors. This makes the doors no longer fit in the door frames.

fig 32-1. Composition of the interior partition walls, 2015
fig 32-2. White plastic doors connecting to the courtyard, 2015
fig 32-3. The workers were installing the steel door frame of the kitchen, 1936 (Beeldbank, 2015)
fig 32-4. The entrance door frames and the window frames were made of steel, 1936 (Beeldbank, 2015)
fig 32-5. Doors with white plastic frames facing the street, 2015
**Windows and window frames**

The original steel window frames have been replaced by the existing white plastic window frames. (33-1&2) The original connection details of the windows are modified during the replacement of plastic window frames. (Ymere, 2014) The windows facing the streets in the living room are full height from the floor to the ceiling (sliding doors) with flat french balconies. The hinged windows in the living rooms were changed to sliding windows with the addition of the midde plastic frame to support the new windows. (Deel 3)(fig 33-4) The original french balconies were darker in colour instead of light grey. (fig 33-3, 5&6) The historical value of the window and the frames are low. They could be replaced completely in the future design to comply with new environmental and climate standards. But the full-height windows could be preserved because they were used to allow more sunlight and natural air to enter the dwellings following the design motto of ‘Light, Air and Space’. (Gemeente Amsterdam, 2014) The use of french balconies in social housing was uncommon at that time. It was special but it was not an original design.
Building Analysis - Details

Building Services

Meter box is found in the living room nowadays. (fig 34-2) It was not required in the past. So there was not extra space in the dwelling for the meter box. It is best to rearrange it to other places for a better use of space in the living room.

In the past, there was no ventilation or heating system built in the original dwellings. Nowadays, radiator is installed in every room to warm the interior. (fig 34-1) Water is boiled in the boiler in the kitchen and warm water is transported to the rooms through the pipes. A fire place was used in the past. Therefore holes are cut through the walls to allow the pipes go through. This caused some thermal conduction. In the kitchen, a pipe for the gas stove was used to transport exhaust gas through the chimney to the outside. (fig 34-3) Nowadays, the pipe was removed. In some dwellings, a mechanical fan is installed to remove the exhaust gas to outside directly through a pipe which is cut into the window. (fig 34-4) None of the existing building services are original. They do not have any historical values. The old renovation was also not good enough for the required indoor climate nowadays.
Public Space (The surrounding)
The morphology of the site has very high historical and architectural values except the traffic road near Willem de Zwijgerlaan that separated the long building blocks on the ground floor. The morphology marked the transitional change from closed block to half-opened strip housing. It is the ideal urban planning at that time. The use of raised ground floors echoes with the concept of community and equality in this project.

The greenery around the site has high historical, aesthetic and cultural values. To include strips of green between different building blocks is the core concept of the site. It has a high historical value because it revealed the ideals of Western garden city during the expansion of Amsterdam West in 1930s. The green spaces make the site an attractive place to live in as claimed by the current residents and Gemeente Amsterdam in 2015. The green spaces include the small parks and children's playground next to the streets enhance the living environment and provide opportunities for gatherings and leisure activities.

Semi-public Space (The building)
The facades of the building blocks have low historical values, low architectural values, low aesthetic values. The overall appearance of the buildings have not been changed but the window frames, french balconies, building entrances and balconies have been changed for more than once. The blue canvas on the balconies and TV satellites destroy the intention of Merkelbach’s design of a neat and clean facade. The canvas also look old and dirty. The white plastic window frames become more explicit than the original steel window frames. The beauty of the original buildings has been destroyed after successive modifications to the buildings.

The brick masonry of the buildings have high historical and architectural values, not only because they are original, but the texture and damages found in the existing bricks also reveal the age of the buildings. The wooden beams and floors have high historical values but low technical values. They are original and still structural but in some areas like the shower room, the beams already bend. The wooden floors and ceilings are not sound proof. The floor to ceiling heights are too low.

Private Space (The dwelling)
The unit plan of the dwelling has high historical values and low use values. The layout of the most dwellings has not been changed because of the load-bearing brick walls. The original design of Merkelbach can still be found in most dwellings. But the design no longer suits today’s demands. The dwelling is too small. The wooden beams in the shower room bend because of the heavy weight of the pipes. Chimneys are no longer needed. Although the original plans have high historical values, factors such as climate control, noise control and views are more important.

The interior of the site has very low historical values and technical values because most of the residents have modified their private space for one or more times. The floor and wall finishes, door and window frames, furniture, fireplaces and ventilation have been changed according to different users. The meter box and kitchen fittings in each dwelling are also not original. The insulation and climate control are also not up to nowadays and future standards.

Hierarchy
The urban morphology of the site is more important than the monumentality of the building blocks. This is mainly because the interiors of the building are the private spaces and they have been modified by the residents according to their personal needs. Most architectural items are no longer in the original state. The historical evidence has been lost. Another reason is that the indoor environment of a dwelling is very important to the living conditions of the residents so the interior including the thermal comfort, noise control, useable space, etc should be upgraded to current standards and even more for the future needs.

On the other hand, the urban morphology of the public space is closely related to the historical context and development of the site and the surrounding. It has very high historical and cultural values. They reflect the history of the site and the building blocks. They also evidenced the history and the urban expansion of Amsterdam West. It affects not just the users in the building blocks but also the public who pass by the site.
RESEARCH ON PUBLIC SPACE
Introduction
Methods and Definitions

Methods
To find proper improvements for public spaces in Landlust, it is important to find out the pros and cons of the existing public spaces, taken into account its historical references, technical designs, social relevance and aesthetics. This chapter is the study of the immediate surroundings of the site. The focus is the streets and open spaces surrounded and bounded by the building blocks, as well as the relationship between the public and private spaces. Firstly, the potential strengths and weaknesses of public space in Landlust nowadays are recorded through observations during site visits. Then, theories are used to prove and explain the reasons for the observations by comparing the public spaces in Landlust to those described in the theories. This chapter focuses on the site and the surrounding streets. Analysis of public program on a bigger scale can be found in the next chapter. The characteristics of Landlust are summed up in the conclusion of this chapter.

Limitations
Despite the differences in context and time period, there are generic problems of public space in modern housing projects observed by architectural historians, urbanists, architects, theories and other authors in the 20th century. In this chapter, I use the theories as evidence to support my opinions about the public spaces in Landlust. Although the theories used are about the criticisms on public spaces, it does not mean that all observations I found are negative. In certain situations, the phenomena described as bad in these theories showed the opposite, i.e. the positive characteristics of public spaces in Landlust. It is possible that there could be both positive and negative impacts at some locations. There might be contradictions. These will be clarified in the conclusion of the chapter.

Definitions
To make strong arguments of the public space in Landlust, I have define the different categories of spaces in this project as follows. (fig 37-1)

Public spaces
Public spaces in Landlust refer to the streets, pedestrian roads, children’s playgrounds, parks, car parks and bicycle parks that are freely accessible by public at all time.

Semi-public spaces
Semi-public spaces refer to the outdoor and indoor places that are closed to public but open to residents. These places include the corridor, stairs and courtyard which are shared by up to 208 households in total within this site.

Private spaces
Private spaces refer to the outdoor and indoor places that are used by one family only. These include the interior of a flat and the respective outdoor balconies.

![fig 37-1. Upper Ground Floor Plan](attachment:fig_37-1_upper_ground.Floor_plan.png)

scale 1:2000
Discovering the strengths and drawbacks of public spaces in landlust

Theories on Public Spaces

There are numerous theories on urban planning and public spaces written by authors worldwide in the 20th and 21st century. The theories selected in this research are the evidence to support my observations and my personal opinions about the public spaces in Landlust.

Jane Jacobs
Jacobs criticizes the 1950s urban planning practices in her book ‘The Death and Life of Great American Cities’. She explained that these urban planning policies hold responsibility for the decline of many neighbourhoods. She stated some common mistakes found in public spaces based on her observations and analysis of the success and failure of real life. She proposed new planning principles of neighbourhood rebuilding. Her principles were guided by the behaviour of people and appearance of neighbourhoods. Despite the different in context and scales, her theories have influenced many architects in the design of housing projects worldwide, especially on the application of public spaces. (Jacobs, 1961)

Richard Sennett
Sennett criticizes modern public spaces based on historical traditions and practices in his book ‘The Fall of Public Man’. He examined the imbalance between public and private life in the 1970s. In his view, private life becomes distorted that we focus more on ourselves and lack the capacity to experience the relationships with neighbours and strangers. He tried to create a theory of expression in public space by a process of interplay between history and theory. Changes in public behaviour over time are evidence for making a theory about the expression of public space nowadays. His theory was back up by analyses of public spaces in the ancient time and the post-industrial period in the 19th century. He tried to find reasons for new problems in public spaces.

Michael Sorkin
In his book ‘Variations on a Theme Park’, he examined the emergence of the new kind of public spaces in 1970s and the effect. Megamalls, gentrified zones, public library, public town halls, etc, these places can be described as theme park where the environment is structured to achieve maximum control. Eight urbanists and architectural critics explore the disturbance of these new kind of public spaces in public life.

Le Corbusier
With Unité d’habitation, his aim was to provide a dwelling that is perfect for the family in the set up of the sun, space, light and greenery. Le Corbusier’s idea of the “vertical garden city” was based on bringing the villa within a larger volume that allowed for the inhabitants to have their own private spaces, but outside of that private sector they would shop, eat, exercise, and gather together. The semi-public space is organized vertically with recreational, education and healthcare facilities. (Brutalist Buildings, 2014)

Dick van Gameren
He wrote an article for the Delft Lecture Series on Architectural Design about the relationship between space and movement in architecture, like the relation between mass and space, should not be understood as opposites, but as a complementary one. Connection and separation have to be considered carefully to operate the link between public and private, outside and inside. The space for circulation regulates the relation between the areas and room inside a building. (van Gameren, 2013)
Criticisms of public spaces
Lack of surveillance

What problems are found in public spaces?

Lack of surveillance
Modern housing projects were built in “islands within a city”. Fences and solid walls were used to keep out extraneous people who do not live in the housing. There is a lack of built-in eyes to regulate the safety in the public spaces. The public spaces in any housing projects should not be planned in hidden corners and silent roads. It is important to keep the sidewalks busy with a continuous flow of people, including the residents and strangers. (Jacobs, 1961)

Where do they happen in Landlust?
There are various public and semi-public spaces in Landlust that are hidden from the main circulation in terms of the location of the site, the urban morphology, accessibility and views. The site is situated at the back of the busy road Admiraal de Ruijterweg. They are completely blocked by the five floors high long blocks on Admiraal de Ruijterweg.
Lack of Surveillance on the streets

Isolation of the Site Location

Small flow of people
It was due to the historical development of Amsterdam-West (refer to the historical development of the site in introduction) along Admiral Ruijterweg that led to the consequence of the site being built in a quiet zone behind the closed block on Admiral Ruijterweg. Admiral Ruijterweg was built before the construction of Landlust began. (fig 40-2) Nowadays, Admiral Ruijterweg remains to be the most frequently used roads for drivers, cyclists and pedestrians to reach their destinations between Sloterdijk station and central Amsterdam. (fig 40-1) Shops were found on this road whereas most of the streets behind Admiral Ruijterweg remain quiet. (Amsterdam City Archives, 2013) As a result, the streets that bounded the site (including Louise de Colignystraat, Juliana van Stolbergstraat and Bestevåerstraat) are lack of passing people. Only people who live in the site would enter the roads. During the three site visits on a Monday morning, Friday afternoon and Saturday afternoon. The streets are almost empty. This causes a serious lack of surveillance on the streets at ground level.

fig 40-1. Transport Network (City of Amsterdam, 2015)

fig 40-2. Construction site of Landlust, 1936 (Beeldbank, 2015)
Lack of Surveillance in landlust

Boundaries around the Courtyard

Urban Morphology
The residential area was set up in traditional closed blocks in the development plan of AUP in 1931. But they saw the drawbacks of the closed block in the field of light and air entry. The plan contradicts with their motto. They looked for alternative urban forms. (Gemeente Amsterdam, 2014) The revision of the plans showed the change in urban morphology in the same area. At last, the plan was revised from traditional closed block (fig 41-1) to strip housing (fig 41-2) to comply with the motto of Light, Air and Space. The new plan (fig 41-3) designed by Merkelbach in 1933 showed his experimental design of strip housing with intermediate strips of greenery. (Rebel, 1994) However, this new urban form has led to other problems in the site.

The plan was also rotated 90 degrees. This resulted in more streets within the big urban form. In the plan 1933 (fig 41-1) there were only two long streets and in the plan 1933 (fig 41-2) there were four streets. This resulted in the reduction of people using each street. This made the streets less safe to use according Jacobs. It is true that most of the youth nuisances in Bos en Lommer happened in the quiet streets as stated in the report of Gemeente Amsterdam. (Gemeente Amsterdam, 2015)
Lack of Surveillance in landlust

**Boundaries around the Courtyard**

**Boundaries around the courtyard from built to now**
In the new plan, the central courtyard are surrounded by the two long row houses on Louise de Colignystraat and Juliana van Stolbergstraat and the one level houses on Besteværstraat, acting as a solid wall, making the courtyard similar to Jacobs’ “island”. In addition, the first floor of the residents units are raised half floor higher than the ground. (fig 42-3) It is good in the users’ point of view that they have more privacy. On the other hand, these three buildings on the sides act as physical boundaries that completely isolated the courtyard from the public streets. The fourth side of the courtyard is enclosed by a three-metre-tall fence with a closed gate. (fig 42-1) This makes the courtyard isolated as islands and this will negatively affect the safety and reduce the frequency of use of the courtyard according to Jacobs.

**Blocking of view to the courtyard on ground level**
It is impossible to look into the courtyard from the streets except the side with the fence. This fence is the only location where pedestrians can look into the courtyard. Yet, the plantation has grown over time. The tall trees in the courtyard blocked some views to the 148m deep courtyard from this side. In the past, the trees were short. It was easier to look into the courtyard from this side than now. (fig 42-2) The series of pictures on the right page taken in September 2015 show the views from different locations of the public streets to the courtyard. (fig 42-1) It reveals that public road users can hardly see what is happening in the courtyard. According to Jacobs, this will make the courtyard unsafe to stay put due to the lack of build-in eyes.

---

**fig 42-1. Upper Ground Floor Plan**
scale 1:1500

**fig 42-2. Trees used to be shorter, Landlust, 1937 (Rebel, 1994)**

**fig 42-3. Schematic diagram: Split level prevented views from street into courtyard at ground level**
fig 43-1. Upper Ground Floor Plan
scale 1:1500
Lack of Surveillance in Landlust

Disappearing Eyes from Above

Views from the balconies in the past
Merkelbach designed a big balcony of 4.5 metre wide for each unit in Landlust. (fig 44-1) His initial idea was to provide extra storage space for the housewives to dry their clothes. The balcony was directly connected to the kitchen. The housewife was the member of a family who used the kitchen most back in the 1930s. Therefore, children played in the courtyard and the housewives could watch their children at a distance while they worked in the balconies. (Grinberg, 1977)(fig 44-2) The courtyard was a safe place to stay due to the unintentional surveillance of the housewives in 1936.

Views from the balconies nowadays
People spend much less time on the balconies nowadays than in the past. Due to technological development, many families are equipped with drying machine. It is no longer necessary to hang clothes on the balconies. Also, due to the changes in functions of the courtyard through time (which will be discussed later), no children play in the courtyard anymore. People look into the courtyard very rarely now. (fig 44-3) The courtyard is not watched by residents as often as that in the 20th century. Moreover, the tall trees also blocked the view of the whole courtyard. (fig 44-4)
Effect of materialization on views from balconies at different periods
When the site was built in 1936, the 4.5 metre wide balcony for each typical unit is divided into two parts, one connected to the kitchen and the other connected to the bedroom. (fig 45-1) This separated the balcony for two distinct functions, i.e. normal height fence from the bedroom and high level fence from the kitchen respectively. (fig 45-1) This was because of the absence of drying machine in the 1930s. This allowed the housewives to hang the clothes for drying in the balcony easily while they worked in the kitchen. The two balconies of different height were both made of the same material, i.e. wire mesh fence. I think that a higher fence was used in the part of the balcony outside the kitchen because this could prevent people from throwing garbage into the courtyard easily. The wire mesh on both fences allowed maximum amount of light entering the interior through the glass doors. At the same time, it also allowed direct views to the courtyard. Wire mesh provided maximum degree of transparency. The mesh is supported by metal frames and attached to the floor of the balcony and the brick wall.

Modifications in use of materials
Later, there was modification to the balustrade of the balconies. The balcony for each unit was still divided into two parts. The fence made in metal frame with wire mesh was replaced by metal bars with vertical supports. The high level fence outside the kitchen was changed to one at waist level. (fig 45-2) There was no record of the reason for this change. This could possibly due to the natural wearing of the weak wire mesh fence. At this stage, the transparency of the new metal bar fence was slightly decreased but the views from the balconies to the courtyard not very much obstructed. In my opinion, the users had more connections with the courtyard by lowering the fence. The users would be closer to the surroundings instead of containing themselves in a cage-like fence. However, another modification in 1990 had lowered the opportunity to look at the courtyard from the balcony and the interior of the dwelling. (fig 45-4) This modification was kept until now. This time, the division between two balconies was removed but an opaque canvas was installed to each balcony. Hence the transparency and views to the courtyard from the dwellings had been lowered gradually since 1937 because of the materials used as the fence of the balconies. Side effects include the increase in privacy and decrease in physical eye contact and communication among neighbours.
What problems are found in public spaces?

**Dead social space**
Public space is the space in which anonymous individuals interact. In modern time, people focused on private interests. There is a loss of communal space of gathering. On the physical level, the environment prompts people to think of the public domain as meaningless. The street level becomes a dead place. Architecture creates the possibilities of meeting, not the meeting itself. It was one chief aim of modern architecture to envision the public realm by means of architectural and urban form. (Sennett, 1974)

**Privatized public space**
Many public places are no longer freely accessible to everyone, they are no longer stages where strangers meet and can discuss. Public space is part of the social life in which public opinion can be formed. Private people who come together as a public. (Sorkin, 1992)

**Lack of contact**
The streets are where strangers meet. The trust of a neighbourhood is formed from many little public sidewalks contacts. A good city neighbourhood achieves a good balance between essential privacy and different degrees of simultaneous contact. (Jacobs, 1961)

Where do they happen in Landlust?

Sennett pointed out that it was the architectural and urban form that had caused the loss of communal space for gathering. Park is one of the most important social spaces for individuals to meet one another in his view. (Sennett, 1974) In Landlust, the courtyard and the green spaces on Louise de Colignystraat are good places where people can meet. The large piece of grass in the courtyard give opportunities for the residents to hold gatherings. The building blocks formed a clear boundary between the public streets and the semi-public courtyard. The residents can enjoy a relatively higher degree of privacy than on the public streets. But it is also bad in a way that the open spaces on the ground level become dead social spaces because residents do not use the spaces created by this architectural settings due to other reasons mentioned in previous pages.

Sorkin used cases of shopping malls, Disney theme parks, colleges, etc to explain the problems in modern public space that only selected people can participate in the privatized public space. (Sorkin, 1992) In Landlust, the gate of the courtyard was opened during daytime in the past and the public streets around the site were opened to public access. Strangers who do not belong to this area cannot meet the residents because of the physical boundaries like the thick walls as described in his book.

Jacobs was concerned about the importance of social contact with strangers and your neighbours. By this, the city neighbourhood would be more safe to live in. She thought that social contact can enhance trust among people in the neighbourhood. The absence of trust leads to no private commitment. (Jacobs, 1961)
The loss of social contact
Sennett noticed the changes of the meaning of ‘private’ to people due to modern sociology concept. All activities in the public become very personal nowadays. (Sennett, 1974) This is true and untrue to some extent. Before the early 20th century, residents in industrial housing have more contact with strangers by opening their doors and windows to their neighbours. (Grinberg, 1977) One of the example is the traditional courtyard housing where people can easily look into the houses (fig 47-1). Another example shows that people used to open their doors to the semi-public corridor (fig 47-2). In the opposite, there were also people who cared more about their own privacy. They avoided contact with strangers as much as possible. In today’s Landlust, more than half of the residents who live on the first floor in Landlust close their windows and curtains. By this, they own the privacy but this causes segregation with other users in the neighbourhood (fig 47-3). To promote contact or privacy or both, would be one of the design questions for my project.

Contact was minimized
The design of raising the ground floor half floor higher than the street level somehow created a segregation between private and public. This design promoted privacy and indirectly led to a decline of contact. This would reduce the trusts among the residents gradually. (Jacobs, 1961) No matter what the users think, the design has limited the opportunity for contact with other people.

The use of gates to separate the courtyard from the street on Willem de Zwijgerlaan also minimized the social contact while increasing the privacy of the courtyard into a semi-public space. The gate of the courtyard was opened during daytime in the past and the public streets around the site were opened to public access. (Rebel, 1994) In theory, public spaces in Landlust should be ideal places for contacts with strangers. In reality, the public spaces nowadays have been privatized for residents only, with the combined effect of the closed gate and buildings on the three sides. Public places are not freely accessible to everyone in Landlust since the introduction of the gate in 1978. In the courtyard, you can only meet residents living in the same block. Strangers who do not belong to this area cannot meet the residents because of the physical boundaries like the thick walls. (Sorkin, 1992) Despite the choices of the residents, the closed gate eliminate completely the opportunity for strangers to join this community.
Lack of places to sit and play

Parks and playgrounds are good places for people to meet with strangers and their neighbours. In Jacobs’ view, parks provide opportunities for parents to know each other while they sit aside and watch their children. Public spaces such as playgrounds and parks with benches and equipment allow children to play freely. But large pieces of grass in parks are boring to children and adults. (Jacobs, 1961) When Landlust was built, there were places in the courtyard of Landlust for adults to sit and chat in the courtyard (fig 48-1). There were also playing facilities for children who were under surveillance by their parents from the balconies above. (page 44) However, due to lack of maintenance and safety issues, these facilities between the buildings in Landlust were removed. Now, only a large piece of grass with trees is left in the courtyard (fig 48-2). Although new children’s playing facilities have been added, they are added in the public street where there are no places for people to sit and no trees to shade the strong sun. (Hooschuur, 2015) Garden and the playground are now separated in the private courtyard and public streets respectively whereas the playground was in the garden in the original design of Merkelbach (fig 48-3)(fig 48-4). The absence of benches in the courtyard and public streets means that people can only walk pass the places without carrying out any prolonged outdoor activities. Thus, the time people spend in the public space in Landlust decreases.
Advantages of the green
The site is surrounded by public greeneries especially on the ground floors. This is due to the results of the urban planning of AUP in 1935. (page 9) The amount of grass and trees are more or less the same in both the courtyard and public streets when compared to the past and now. (fig 49-1&2) The green spaces in Landlust when consider as landscape parks are beneficial to both the residents and the environment.

The aesthetic value encompasses more than the seen view, visual quality or scenery, and includes atmosphere, landscape character and sense of place (Schapper 1993) Studies for perceptual psychology have shown human preference for landscapes with a higher visual complexity particularly in scenes with water, over homogeneous areas. (Crawford 1994) The complexity and appearance of the landscape also affected the effect it brings to the environment. The green in the site should be kept and could possibly be enhanced in the future.
In the Visual Impact Methodology Report, the Scenic Quality Inventory and Rating Chart below showed a table of guidelines of what types of landscape have high and low visual impacts (see appendix). The table was derived from Bureau of Land Management of the Department of the Interior of the USA Government. (Newtown Landscape Architects, 2011) The limitation is that the scale referred to a larger landscape in the report. It could be used as a basic guideline to judge where the greeneries in Landlust are good landscape parks.

**Guidelines:**

- The landscape should be distinctive from other places within the same area.
- A good landscape is comprised of a more vertical relief whereas a flat ground has low and no interesting features.
- Adjacent scenery greatly enhances the visual quality of a landscape.
- A variety of vegetative types is required as expressed in interesting forms, texture, and patterns with one or more major types.

During the site visits, some residents gave positive comments to the green spaces in Landlust. They enjoyed the greeneries in the site mainly because of the views from their homes. Yet, the green spaces in Landlust can be further enhanced in the future in my opinion. Below are my personal reflections about the green spaces in Landlust in respond to the guidelines on the left. They are also listed according to the level of importance.

**Landlust:**

The green spaces in Landlust are generic compared to other green spaces in the same urban block. The site lacks of unique characters.

The existing landscape of the site and its whole urban block is flat. This means the green spaces in Landlust could be made more interesting. If complexity is added, residents might enjoy the differences in the scenery when they go to different spots every time. This will increase the aesthetic values of the existing courtyard. By introducing differences in levels, different spaces are formed. These spaces could be used as gathering spaces for small groups of residents and their friends. This could add a more diversity to the functions of the existing green spaces.

Both the courtyard and the public streets are surrounded by brick buildings. The colour of the bricks act as calm backdrops for the plants and trees. The bricks and the plants are in harmony. But in the courtyard, the facade is dominated by the blue fabric on the balconies. The choice of the fabric with a flowery pattern was perhaps an attempt to fit in the surroundings. However it created a negative visual impact to the green spaces in the courtyard because it added too much disturbance and the fabric looked dirty and old.

Within the site, there are a variety of different types of trees, ranging from big monumental trees to small side plants. They also vary in sizes and heights. This positive characteristics should be preserved.
What problems are found in public spaces?

Layers of Publicness
Public space is multi-layered without relating the layers. “Corridor-street” must be killed. Public spaces should not be about open spaces that are on the ground floor. Public spaces should also extend vertically. Public furniture should be found on the public landscape. Public spaces should include places for leisure and well-being. (Corbusier 1953) Despite the fact that his ideas are designed for 1950s, recent renovations proved that his theory on public spaces in residential housing is still relevant in the 21st century. Over the decades, public programs in this project are still in use today. During recent interventions, the public spaces are preserved. (Spring, 2008)

Where do they happen in Landlust?
Le Corbusier was concerned about the relationship of public spaces that are in direct vicinity of every unit in the building. In Landlust, the whole building block has only one function - residential. The only recreational space is the playground on the ground floor. There are absolutely no public spaces above ground level. Semi-public spaces above ground are just for circulation purposes only.
Missing functions of Public Space

The mapping of existing functions

fig 52-1. Mapping of existing programs in the public spaces of Landlust, scale 1:200
Implications of the map

The mapping of public amenities in the existing public and semi-public space in Landlust shows the distribution of public recreational facilities and other program on the ground floor of the site and its immediate surroundings. (fig 52-1) The idea of this map is to discover the existing functions other than greeneries in the public spaces of Landlust. There were a few minor changes to the public spaces in Landlust in the past 50 years. Therefore instead of looking back to the past, the aim of this map is to find out the merits and drawbacks of the existing public program. The mapping of program at a larger scale can be found in the next chapter.

The site is covered with grass (indicated as light green in fig 52-1) and trees (dark green). The site is surrounded by trees on every side. As suggested by Le Corbusier, there should be public furniture in open spaces and places for leisure and well-being. (Corbusier 1953) Jacobs also mentioned that it is important to have a diversity of functions in public spaces and sidewalks of residential buildings. The landscape parks without public facilities to sit and to shade the sun do not attract people. (Jacobs, 1961) In the site, majority of the public space is pedestrian paths and greeneries. The site is surrounded by adequate amount of trees and grass. It is good for views, sun shading and environment. (page 49-50)

However, there are very few recreational facilities. The children’s playgrounds (yellow in fig 52-1) and some grass (light green) are bounded by short plants (dark green) that act as fences to prevent people from entering the area. By this, this could possibly prevent children from running to the cars. But this makes the playgrounds isolated from the public paths. This reduces the opportunities for unplanned visits to the parks and playgrounds. Moreover, the playgrounds are split into three separate parts around the site. Each playground becomes very small that it is not appealing to children and it is also difficult for parents to look after their children. It is also one of the future plan of Gemeente Amsterdam to interconnect different parts of playground and parks in Landlust. (Gemeente Amsterdam, 2015) This reduces the frequencies of use of these playgrounds by people which leads to other problems such as safety issues and trusts among neighbours mentioned in the previous part of this chapter.

There are trash bins, car parks (grey) and bicycle racks (red) around the site but the parking lots for bicycles are not enough given the fact that the bicycle racks are all occupied even during daytime when people go to work and there are bicycles anywhere around the site (orange). The bicycles are parked next to the children’s playground, next to the plants, trees and lamp posts. The recreational facilities are present in very small amount and do not match the need of the population living here.

Missing functions of Public Space

The mapping of existing functions
Missing functions of Public Space

Changes in functions over time

The pictures from Google earth show that there was an attempt to renovate the children’s playground recently. (fig 55-1 & 2) It is good in a way that more children’s facilities were added during the renovation. On the other hand, it is bad that two benches are removed. Now, there are no places in the playground where residents can sit. There was no record of this update but the report from Gemeente Amsterdam stated that youth nuisance and noise nuisance are found in the public streets and playground in the past 5 years. One of their future plan is to avoid these problems. (Gemeente Amsterdam, 2014) Removing the benches in this playground could possibly be one of their strategy to avoid youths from staying here. The result is negative because of the lack of public furniture in the public spaces of Landlust. In my opinion, placing benches is not the only solution to increase the number of people using the parks but having comfortable places to sit, such as weather-proof shelters and big stairs could be possible ways to make the parks more welcoming.

The street profile remained the same since Landlust was built until now. The program of public space on the streets are similar in the past and now but more amenities that were not planned in the original design were added, such as the additional number of plants and trees on Besteværstraat. (fig 30-3-6) Although cars were expected to park in front of the building, there were no posts and signs in the 1930s. There were also no bicycle racks and trash bins. These additional items have slightly changed the appearance of the streets and the overall atmosphere of the site. They are elements added to fulfil today’s regulations. They become part of the history in the public spaces of the site. They should be preserved because of their historical relevance.
Criticisms of public spaces
Circulation and Movement

What are good architectural designs of public spaces?

Movement through collective spaces
Designing the circulation within and around the future building enables us to structure the relation between a building and its immediate surrounding. Connection and separation have to be considered carefully to operate the link between public and private, outside and inside. The issues of visual and actual accessibility of a building, the continuation of the inside outside and of the outside inside the building, all touch on elementary issues of privacy, diversity and density. Public spaces that are accessible to the public and collective areas prevent the surroundings to become uniform public space. The space for circulation regulates the relation between the areas and room inside a building. van Gameren emphasizes the movement through the inside and outside of the building. The distinction between inside and outside does not coincide exactly the distinction between public and private. In housing, collective open spaces establish a link between home and public space. The architectural articulation of the movement through a building and open spaces ensembles a more complex transition from public to private. It also defines a system of public routes through a succession of open and covered space, and collective routes leading to the private spaces of the dwellings. (van Gameren, 2013)

Where do they happen in Landlust?

In Landlust, the circulation through the open spaces from private spaces are direct and simple. The two building blocks in Landlust are 170 metres long. The blocks only split near the end on Willem de Zwijgerlaan. The remaining block is still 150 metres long. The public access to homes and the courtyard is only through the two long streets, Louise de Colignystraat and Juliana van Stolbergstraat. (fig 56-1) There is only one route to the public street and one route to the courtyard. Instead of criticizing the existing circulation of Landlust, van Gameren’s theory suggests possible ways to strengthen and enhance the relation between private and public spaces in Landlust.

fig 56-1. Route to street

scale 1:1500
Circulation and Movement

Routes from private dwellings to collective spaces

Routes from private dwelling to public street
The routes are simple without complex transition from public to private. (fig 58-1) The visual and actual accessibility are the same. In van Gameren’s view, this could be improved in the future to allow a more complex transition between the public and private, inside and outside.

Routes from private dwelling to public space
The circulation in the public spaces in Landlust is not flexible. The only entrances to the courtyard are the back doors (fig 58-2) and the gates on the Willem de Zwijgerlaan and Bestevaerstraat. The gates were opened to public access during daytime in 1936. However, the use of courtyard space has decreased through time. From 1978, the gates are no longer open to public. The only entrance for each resident is the back door in the basement. The circulation of the public streets is static. On the other hand, there are two exceptions near Willem de Zwijgerlaan. The units at the end of the building blocks do not have direct entry route from the stairs to the courtyard. (fig 57-1) The road in between has separated these dwellings with the public space. This remained the same from 1936 until now. However, residents living in those dwellings used to have limited access to the courtyard during daytime in the past. They had to exit from the front door and entered the courtyard through the gate at the fence. Nowadays, since the gate is closed all the time, residents on that end can no longer access to the courtyard. In van Gameren’s view, the connection of the private and public, outside and inside, either in visual or actual accessibility should be continuous. This should be improved in the future design.
Circulation and Movement

Routes from private dwellings to collective spaces

Variations in routing
In Landlust, the circulation and movement for residents to public street and collective places are direct with clear and simple distinction from private to semi-public and from semi-public to private spaces. In Merkelbach’s design, all walls and corridors follow a rectangular grid where every line is perpendicular to each other. (fig 58-1) However, the only exception is found at the basement where the corridor is diagonal in plan. (fig 58-2) Merkelbach seemed to invite residents to enter the courtyard space by this diagonal settings but he could also achieve the same result if the corridor is perpendicular to the grid. Therefore, there is no strong reason for this variation. Even though there is a slight irregular pattern in the routing, the entrances have not been changed since it was built. (fig 58-3 -6) The problem of this configuration is that the elementary issues of density and diversity were not considered. The design of direct routing to the semi-public space has made the courtyard becomes uniform public space according to van Gameren’s theory.
Criticisms of public spaces
Safety in circulation routes

What are good architectural designs of public spaces?

Danger in enclosed stairs and corridors
Vandalism and other crimes mostly happened in the corridors of public housing projects, eg. Blenheim Houses, Brooklyn. In cases where balcony corridors were used, the crimes happen at elevators and fire stairs. This proved that enclosed stairs and corridors were more dangerous compared to outdoor circulation routes. (Jacobs, 1961)

Where do they happen in Landlust?

Safety in the stairs of low-rise
In Jacobs’ book, she pointed out by statistics that many of the vandalisms and crimes happened at the stairs and corridors of many high-rise in 1950s because the closed corridor and hidden fire stairs could not be seen by people from outside. (Jacobs, 1961) In the context of Landlust, this problem was eliminated because of the small number of residents each stair served. Each stairwell has two staircases intertwining to form a pair of scissor stairs to reach alternative floors above ground, i.e. the two families each on the first and third floor use the same stair and the two families each on the second and fourth floor use another stair in the same stairwell. (fig 60-2) Thus, every stair is used by four families only and eight families shared the same front door. (fig 60-3) Residents know their neighbours, the safety of the stairs is watched by each other.

Although the windows in the stairwell of Landlust buildings are at high-level primarily for light only (fig 60-4) and other people cannot see the stairs from the street, the report from Gemeente Amsterdam revealed that stairs in Landlust are safe. Most of the minor problems including youth nuisances and noise nuisances only happen on the streets and public parks. (Gemeente Amsterdam, 2014) During the site visits, some current residents expressed their satisfaction about the design of the scissor stairs in Landlust. (fig 60-5) They enjoy the privacy because each stair is only shared by few families. The staircases are good semi-public spaces in Landlust.

Corridor in Landlust
Every stair is used by two families on each floor only. On each floor there is only a small landing platform in front of the doors of the units. There is no corridor except the basement. (fig 60-1) The corridor at the basement are shared by eight families. They use the same stair to reach their storage rooms at the basement. This is where Jacobs described as dangerous places for crimes. Although no records have noted the corridor at the basement in Landlust is a dangerous place, the light and openness of the corridor can be improved in the future.
Criticisms of public spaces

Safety in the circulation routes

fig 60-1. route from stairs to courtyard, basement floor plan

fig 60-2. Scissor stairs

fig 60-3. Entrance at ground floor

fig 60-3. Windows at high level

fig 60-5. Original drawings of stairs, 1933
Conclusion
Charateristics of public spaces in Landlust

The pros and cons of the public spaces in the site are concluded here and in a schematic diagram. (fig 63-1) The brackets below indicate whether the described characteristics found in the existing site are positive or negative in my opinions, based on the analyses and theories discussed in previous pages. Positive signs suggest that those elements should be preserved or enhanced in the future whereas negative signs suggest that those elements should be removed or improved in the future.

Public Spaces
Due to the historical development of Amsterdam-West, the site is located in a quiet area behind the building blocks on Admiraal de Ruijterweg. The silence in the area makes it an ideal place for housing. (+) It is also because of this reason, the streets that bounded the site are lack of continuous flows of people. (-) Only people whose destination is the site would enter the area. According to Jacobs, this makes the streets less safe because there is limited surveillance by pedestrians. Youth and noise nuisance happen sometimes in these quiet streets, as observed and recorded by Gemeente Amsterdam. (-)

In Landlust, the ground floor dwellings are raised half floor higher than the street. This brings certain degree of privacy to the users living on the ground floor. (+) It promotes equality as everyone has the same authority on the courtyard regardless of the floors they live in. (+) The downside of the raised floors is two-folds. On the courtyard side, since the residents do not own the spaces in front of their homes, they do not have the authority to decorate and alter the communal courtyard. This makes the courtyard become a uniform space without individual characters. (-) As stated by Sennett, people care about their private interests. They consider the public doman as meaningless. Hence, the residents do not want to take the responsibilities to maintain the spaces. This causes a deterioration of the courtyard over time. (-) On the street side, the raised floors destroy the direct visual and physical connections between the public streets and the semi-public courtyard. The building blocks on the three sides form a solid boundary. (-) This reduces the surveillance on the courtyard space. (-) It also reduces the chances of communication between the residents and other people in the neighbourhood. (-) In Sennett’s view, this would reduce trusts among people and eventually lead to a decline of social spaces.

The streets around the site serve more functions than circulation routes. The most important and positive feature is the adequate amount of green spaces in Landlust. It is good for views, climate and air. (+) But the outdoor spaces can be improved to further enhance the quality of the public spaces and the convenience of the residents in the future. Le Corbusier emphaized the importance of having public furniture and recreational facilities in public spaces. The existing parks in Landlust are lack of public facilities. There are very few recreational facilities in the site. (-) The children’s playgrounds are separated into parts. Each playground becomes very small that it is not appealing to children and it is also difficult for parents to look after their children. (-) The distribution and location of bicycle parking spaces are not good enough that make residents to park their bikes everywhere on pedestrian roads. (-)
Semi-public Spaces
There are various positive and negative areas in the semi-public spaces of Landlust. Instead of the traditional closed building blocks, strip housing was used by the AUP in 1931. Based on the motto of ‘Light, Air and Space’, many trees and grass were planted around the building blocks. (+) This brought a lot of merits to the atmosphere. The green spaces in the courtyard provide visual and sensory comfort to the residents. (+) Despite the lack of complexity in the appearance of the landscape, residents are satisfied with the amount of green planted in the courtyard. (+) However, as stated by Jacobs, the lack of diverse functions in the existing courtyard makes the spaces less attractive to be used frequently. (-) In the 1930s, there used to be more recreational facilities and benches in the courtyard. Nowadays, the absence of public furniture such as weather-proof shelters reduces the number of hours residents would spend in the courtyard. (-) The courtyard could be enhanced in the future by adding more unique characters and functions. The large piece of grass in the courtyard has the potential for gatherings and events to be held in the future.

The fence and gate on Willem de Zwijgerlaan were built to regulate the safety in the courtyard. In the past, the gate was opened during daytime that people would use the semi-public courtyard a lot more frequently than now. Since 1978, the gate was closed permanently. The courtyard became privatized. The access to the courtyard became more difficult now than before. (-) Van Gameren’s theory mentioned the need of careful connection to operate between public and private, outside and inside. Circulation spaces regulates this relation. Spaces that are accessible to the public and collective areas prevent the surroundings to become uniform public space. In Landlust, the routes linking the collective spaces and private spaces are now separated by gates and doors. (-) The circulation routes lack complexity. Hence, the accessibility to the semi-public courtyard should be reconsidered in the future. Moreover, the design of the scissor stairs is appreciated by the residents because of the high level of privacy. (+) But the light and openness of the corridor can be improved in the future.

Conclusion
Characteristics of semi-public spaces in Landlust

People especially housewives used to look into the courtyard from their balconies frequently in the past. The safety in the courtyard was controlled among the residents, according to Jacob’s theory. Due to the changes in social concept in the past decades, residents use their balconies less frequently and they are less aware of what is happening on the street and the courtyard nowadays. (-) The views to the courtyard are also covered partially by successive changes in the materials used for the balustrade of the balconies. (-) The existing blue canvas gives extra privacy to residents. (+) Yet, it blocks some sunlight from entering the interior of the dwellings and reduces the scope of views to greeneries in the courtyard. (-)
Fig 63-1. Overview of strengths and weaknesses in public spaces

(-) dwellings on this end of the building blocks do not have direct access to the courtyard
(+) direct access to courtyard through back doors

(+, -) privacy protected by the blue canvas
(-, +) sunlight and views blocked by the canvas

(-) visual and physical separation between public and private created by the building blocks and raised ground floors - lack of social contact
(+, -) privacy and equality due to the raised floors

(-) closed gates reduce uses of courtyard
(+, -) restrict to use by residents only - privacy

(+, -) green spaces with many trees and plants
(-) lack of benches and public furniture
(-) lack of complexity, diversity and unique characters
(-) children's playgrounds spread around the site
(+, -) quiet residential area

(-) lack of continuous flow of people
(-) lack of built-in eyes from above and difficult to be seen through the gates - safety issues
(-) bicycles being parked everywhere that block the pedestrian roads
(+, -) monumental trees that add aesthetic values to the flat landscape
(-) youth nuisances and noise nuisances
Significance of the data

This chapter is the study of demographics, public program and future plan of Landlust. The focus is on a larger scale to include more of the site surroundings, within 500m, equivalent to 5 minutes walking. (fig 65-1) The reason is that some larger public program and public spaces such as playgrounds, theatres, public squares and urban parks are not present within my site but it does not mean that residents do not have access to these facilities nearby. They are functions that are shared by more people in the same neighbourhood. This study is important because the conclusions made in the previous chapter concerns the site itself. However, it is impossible and not efficient to build everything that the residents need within the limited space in the site. Therefore this chapter is the research of available public amenities in the site surroundings. The goal is to find out whether the existing types and amount of public spaces match with the needs of the population living in the district including different age and ethnic groups. Thus, the results suggest the suitable types of program and designs to be included in the site in the future.

This chapter consists of two parts. The first part is the studies the public space in a quantitative approach. The research of this chapter justified the conclusions of the previous part using data and statistics obtained from Onderzoek, Informatie en Statistiek (OIS) of Gemeente Amsterdam. The highlighted area is where the survey of the demographics of Landlust is conducted. (fig 65-2) Most of the statistics available concerns the present time. Therefore, I would also study the future plan of Bos en Lommer area by Gemeente Amsterdam. It provides information about public space in a qualitative approach. It contains the Gemeente’s future policies to enhance the quality of neighbourhood, in terms of public program, safety, education and cultural integration for different nationalities.
People living in Amsterdam has a multi-cultural background. The statistics obtained from OIS are grouped and put into pie charts for a better overview. The statistics can be concluded in the followings.

1) Landlust has a significantly higher percentage of non-native Dutch residents compared to Amsterdam and Amsterdam-West. Most of the immigrants come from Turkey, Suriname and Morocco in all three areas. The combined percentage of immigrants from these three countries are 23% (Amsterdam), 22% (Amsterdam-West) and 37% (Landlust) respectively.

2) Landlust has a significantly lower percentage of native Dutch residents with 49% (Amsterdam), 51% (Amsterdam-West) and 39% (Landlust).

3) Immigrants from other countries, both Western and non-Western countries comprises of less than 1% of all population from each country.

In Landlust, the vast majority of the population is not native Dutch. That means that extra concerns are needed in the provision of special types of public space for other immigrants, especially for people with moroccan background. The report of Bos en Lommer future plan shows that it is one of the Municipal’s policy to lower conflicts among different ethnic groups. Many children from the ethnic groups still grow and live in poverty in Landlust nowadays. Extra care to help them with education level, healthcare and youth nuisances, especially for girls between 12 and 23 years, are planned. (Gemeente Amsterdam, 2015)
Cultural Habits of Immigrants

Social contact
Studies showed that both Moroccan-Dutch and Turkish-Dutch shared similar cultural habits. They tend to make friends and spend their leisure time with people of the same cultural background and same sex. Girls participate in leisure activities less frequently than boys. (Buijs, 2011) Despite the fact that they spend more time with the same ethnic group, it does not mean that they have fewer contacts with native Dutch population. It is expected that the younger generation practices less Muslim activities but the survey proves that this assumption is wrong. Immigrants of the second generation tend to feel more Dutch than the first generation whether they have been in the Netherlands for a shorter or longer period. (Sociaal en Cultureel Planbureau, 2011)

Language
The first generation of the Turkish immigrants do not speak Dutch or has only limited knowledge in Dutch language. The second generation are mostly bilinguals from age of six because of the opportunities to meet native Dutch playmates at day-care centres. (Extra, 1993) It is one of the future plan of Gemeente Amsterdam to develop their language proficiency and that will result in higher employment rate and income. (Gemeente Amsterdam, 2015)

Religion
Most Turks and Moroccans consider Islam to be the centre of their culture. Eighty-seven percent of Turks in the Netherlands are Muslim, making it the largest ethnic group in the Netherlands. (Maliepaard, 2012) They always organized activities and formed organizations related to their religion. Their Islamic faith plays a central role in the life of society. In the Netherlands, they still participate in religious events. 40% of the Muslims visit the mosques every week. Older men participate most frequently. Most Muslim men prayed five times a day. But it does not necessarily have to pray in a mosque. Most common factors that affect their visits to mosque include working schedule, locations. Women attended mosques less often than men. They participate in Ramadan and eat Halal. But there are some Muslims of younger generation who have never been to a Mosque or never pray. The survey also reveals that Moroccans follows their religion more strictly than Turks. Survey shows that their religious practices is not affected by their educational level. (Sociaal en Cultureel Planbureau, 2011) The table shows the religious attitude of Muslims in the Netherlands. (fig 67-1)

Effects on provision of public spaces in Landlust
Personal view: Due to the large proportion of Muslims in Landlust, the functions of public spaces should include their needs, such as mosques, quiet places for praying during the day, gathering spaces for religious activities, event spaces for women exclusively. They have strong beliefs in marrying with a person of same religion. Therefore, Landlust does not only need places for their religious activities, but also public spaces for other social gatherings and meet ups. Only small amount of Muslims in Netherlands think their children should go to a Muslim school. The facilities for children should welcome children from different ethnic groups. They should be well-planned because they are most possible places for the Muslims to integrate with Dutch and other Western and non-Western people, and also the best place for them to learn Dutch language. In conclusion, when planning for public spaces in Landlust for ethnic groups, the hierarchy of importance is first the needs of playgrounds for children, then gathering and meeting places, less importantly mosques.

<table>
<thead>
<tr>
<th></th>
<th>Turkish</th>
<th>Moroccan</th>
<th>Afghan</th>
<th>Iraqi</th>
<th>Iranian</th>
</tr>
</thead>
<tbody>
<tr>
<td>regards self as Muslim</td>
<td>94</td>
<td>42</td>
<td>85</td>
<td>61</td>
<td>34</td>
</tr>
<tr>
<td>visits mosque at least once a week</td>
<td>44</td>
<td>44</td>
<td>13</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>prays five times every day</td>
<td>27</td>
<td>26</td>
<td>23</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>participates all days during Ramadan</td>
<td>66</td>
<td>93</td>
<td>44</td>
<td>50</td>
<td>16</td>
</tr>
<tr>
<td>eats halal every day</td>
<td>80</td>
<td>93</td>
<td>66</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>wears headscarf (women)</td>
<td>48</td>
<td>64</td>
<td>21</td>
<td>38</td>
<td>13</td>
</tr>
<tr>
<td>‘My religion is an important part of who I am.’ (agree)</td>
<td>85</td>
<td>95</td>
<td>82</td>
<td>77</td>
<td>63</td>
</tr>
<tr>
<td>‘It’s wrong for a daughter to marry someone from a different religion.’ (agree)</td>
<td>64</td>
<td>76</td>
<td>47</td>
<td>42</td>
<td>15</td>
</tr>
<tr>
<td>‘Muslims must live according to the rules of Islam.’ (agree)</td>
<td>54</td>
<td>73</td>
<td>37</td>
<td>32</td>
<td>17</td>
</tr>
</tbody>
</table>

fig 67-1. Religious practices and attitude of Muslims in the Netherlands, numbers are in percentage. (Sociaal en Cultureel Planbureau, 2011)
Population and Age Groups

The amount of public spaces needed is greatly affected by population growth whereas the types of public facilities and public spaces required depend on the distribution age groups in Amsterdam. The statistics show that the population in Amsterdam has been increasing since 1980. It is predicted that the population will continue to increase. (fig 68-1) The pattern of age distribution between 1985 and 2030 shows that the pattern is more or less the same over half of the century. Although there is a general increase in population at all ages, the proportion of different age groups in the society remains unchanged. The biggest age groups in Amsterdam are young people from 20 to 35 years (fig 69-1) in which the pattern is similar to that of Landlust. (fig 69-2) In Landlust, the biggest age group is 30 to 39 years (23%) and second largest is 20-29 (20%). Normally it is expected people who aged 20 to 39 years and currently living in Landlust will grow old and measures are needed for the aging of people in the neighbourhood. However, this is not the case in Landlust. Statistic shows that the number of people moving in and out (fig 68-2) is more or less the same. It reveals the fact that many people who live in Landlust will not stay in the same area in the future, also as evidenced by the predicted distribution of age pattern in 2030 (fig 69-1), age 20 to 40 years would remain to be the largest age groups in Landlust. There will be a slight increase in the percentage of women in the future. (OIS, 2015) In my view, the difference in proportion of men and women is not very big. No special measures for the increase proportion of women are needed for present and the near future.

Effects on the design of public spaces in Landlust

Personal view: According to the age distribution, public space should be designed mainly for people age 20 to 40 years. However, in the policy of Municipal of Amsterdam, it stated that most people who use public space are youths with age 15-25 years. It also stated in the future plan for Bos en Lommer that the number of public facilities in Bos en Lommer is sufficient to cope with the current amount of population due to the fact that residents do not use the public space because of the poor quality of the public space. (Gemeente Amsterdam, 2015) Hence, with the combined results of statistics and usage in reality, public spaces should be well maintained especially for people age between 15 and 40 years.

fig 68-1. The population growth pattern of Amsterdam from 1860 to 2040 (OIS, 2015)

fig 69-1. The distribution of age in Amsterdam, from 1985 to 2030 (OIS, 2015)

fig 69-2. The distribution of age groups in Landlust, nowadays (OIS, 2015)
As mentioned in previous chapter, the safety of the public spaces in Landlust is affected by the design of public spaces. On this page, some statistics from OIS showed the safety index of Landlust when compared to other districts in Amsterdam. The index shows the safety index, criminal index and fear index of Landlust. (fig 70-2-4) The colour indicates the safest areas as green and the less safe areas as red. It shows that Landlust is relatively unsafe. Its index is higher than the median of all districts in Amsterdam. (fig 70-1) These figures give an overview of how safe Landlust is. This is important because the future design could be designed to avoid dangerous places. The table on the next page shows the safety index of Landlust in each category. (fig 71-1) The evidence shows that stealing related to cars is the most severe crimes in Landlust. Recent news reveals that stealing in garage is getting more frequent and serious now. Most of the stealings from cars happen in garages with shelters and gates. Twenty-four car windows were smashed in one weekend in parking Q-park which is just 800m away from the site. The garage is badly secure with no guards at entrances and broken cameras. The residents and police both agree that it is safer to park on the street than in garages. (Echt Amsterdam News, 2015) It shows that the safety of Landlust needs improvements.
Effects on the design of public spaces in Landlust

Personal view: Future plans of Gemeente Amsterdam include many measures regarding the safety in Bos en Lommer area. There are a few focus points, most of them refer to the public streets and parks which could act as references for my project. In the report, it states that better supervision of playgrounds with additional management and intensified more places oversight are needed. This will increase surveillance on the streets. Improvement of lighting in public spaces should be done for safety purposes. It is also important for residents to regain the public space and restore the authority and trusts of residents. Most of the burglaries are carried out by poor people. It is one of the measure to combat with the effect of poverty. Also, safety on school routes and in car parks should also be enhanced. (Gemeente Amsterdam, 2015)

The safety measures coincide with my research studies in the previous chapter. Jacobs mentioned the importance of surveillance on streets. The site and the surroundings look safe during daytime when I visited it for a few times. Now, statistics have proved that there are various dangerous points in Landlust which should be improved. As suggested by Gemeente Amsterdam, one of the solutions is to raise the authority of residents on public spaces thus increase the surveillance and safety on public spaces.

![Safety index of different categories in Landlust, 2015 (OIS, 2015)](image-url)
A high percentage of people especially children and young people live in poverty. The tables on the right show the upgrowing trend of the percentage of minimum households and minimum young people. (fig 72-1-2) The percentage of minimum households (21%) in Bos en Lommer is higher than that of Amsterdam (16%) whereas the percentage of minimum youth in Bos en Lommer (27.2%) is also higher than that of Amsterdam (17.1%). These statistics from Onderzoek, Informatie en Statistiek (OIS) of Gemeente Amsterdam is used as guidelines for the future plan of Bos en Lommer area where poverty is one of the major long-term issues to deal with. On the other hand, the percentage of cheap rent dwellings and small dwelling sizes is decreasing in recent years. (fig 72-3&4) Yet, it is still higher than that of Amsterdam, especially the dwellings sizes (Bos en Lommer 62.6%, Amsterdam 37.5%).

Effects on the design of public spaces in Landlust

Personal view: These statistics do not have direct linkage with the public spaces in Landlust. However, the number of small dwellings means that the dwellings built in the future have to be larger. This could possibly take up some public and green spaces to give more space for the dwellings. However, it is also the future plan of Gemeente Amsterdam to further increase the amount of public space and green space. Therefore, in my design, I should be aware that the amount of public space would not be reduced while the dwelling sizes are increased.
fig 75-1. mapping of facilities in area within 5 minutes walking distance from the site. base map from (City of Amsterdam, 2015)
Urban Parks

The circular map shows the program in the public spaces within 5 minutes walking distance, 500 metre from the site. (fig 75-1) The area has a lot of green space. As shown on map, there are some parks with recreational facilities but they are all 5 minutes away from the site. There is only place for cultural events in the area, i.e. the Podium Mozaiek. It was a church until it was renovated and transformed into a cultural centre in 2005. (fig 74-1&2) It is now a theatre for music, dramas and exhibitions.

Effects on the design of public spaces in Landlust

Personal view: The good thing in this area is that trees can be found on every road and street. But the parks that have recreational facilities are limited. There is only one park on Hertspieghelweg that is being used frequently by people. The park includes some children’s playing facilities and a basketball court. Given the amount of youths and young adults living in Bos en Lommer, the amount of recreational facilities either indoor or outdoor is very insufficient. Moreover, there is only one cultural venue in the area. Even though it is a big theatre that can accommodate a few hundreds of people at the same time, I doubt the usefulness of such cultural centre. As statistics shown (fig 72-1) there is a relatively high percentage of minimum households, they can hardly afford to attend events held in this theatre. It is good that there is a place of cultural events. At the same time, I think there should be more cultural places in the area that should be free of charge for people from different income groups. As discussed in previous part, due to the large proportion of ethnic groups in the area, the amenities in public spaces in Landlust should be suitable for them. There is no mosque at all in the site surroundings. The nearest mosque is Westermoskee located on Piri Reisplein which is 25 minutes walking from the site. One of the major cultural habits of Muslims is to pray five times a day. Having a mosque that is located more than 2 kilometres away from the site is not sufficient. The design of public spaces in Landlust should incorporate the special needs of the ethnic groups and minimum households.
Future policies of Gemeente Amsterdam

There is a long list of long-term and short-term planning of the Gemeente Amsterdam to improve the quality of Bos en Lommer area. The major focus points are as follows.

Cultural Integration
Plan of Gemeente: The plan of Gemeente Amsterdam is to bridge different ethnic and cultural background. This is done by inviting people of different background to participate in social activities and to organize more talent shows. In general, they want to increase the amount of cultural activities because the increasing amount of art and cultural events in Amsterdam proves that it is beneficial to the community. (Gemeente Amsterdam, 2015)

Personal view: The integration of different ethnic groups is not just a social problem. The planning of public space for gathering and special events can provide more opportunities for integration. Since the Gemeente has this plan, a space for public art and cultural events can be included to the site in the future design. The space can also be used for Islamic to hold religious events.

Economics
Plan of Gemeente: The municipality wants to improve poverty in the neighbourhood and increase youth employment. They think by increasing their language proficiency in Dutch can help the unemployed youths to get a job and solve the problems of burglaries. Thus the safety in the neighbourhood could be increased. They also reduce the amount of minimum income households by selling some social housing in private markets. Housing renewal to increase the number of homes in different ownership and price and suitable for people in different life stages. (Gemeente Amsterdam, 2015)

Personal view: To raise the average income of the households, the pre-war social housing should be upgraded and transformed to modern homes that fulfil the needs of newcomers. The current size of dwellings in the site is too small. The installation and climate comfort is also poor. These two aspects are first things to be improved during restoration of the housing monuments.

Improving and Greening Public Spaces
Plan of Gemeente: The public area should be clean and safe with high quality of green spaces and future increase the greening of public space. This could be done by increasing the authority on public spaces, such as researching on the possibilities to make public schoolyard. The safety on roads should be enhanced, especially on school routes and parks by improving the lighting in public parks and improving the public accessibility of the public space for elderly and disabled. More maintenance of pavements, green, playgrounds and street furniture. (Gemeente Amsterdam, 2015)

Personal view: The amount of green space is adequate within the site. The quality can be improved by increasing public accessibility as suggested by the Gemeente. But just adding ramps and levelling the streets for elderly and disabled are not enough. The accessibility should be improved for all people. As suggested by Jacobs, sufficiently dense concentration of people on the streets would increase the safety. This would also reduce the commonly found youth nuisances on the streets in Landlust. Therefore the design strategy of public space in Landlust could be to rearrange the routing in the site.

Public facilities
Plan of Gemeente: Expansion of bicycle parking on streets. It is also their plan to interconnect the public spaces at different parts in the neighbourhood and allocate more public spaces for recreational purposes. (Gemeente Amsterdam, 2015)

Personal view: As mentioned in previous chapters, a lot of bikes are not parked on racks. They are either parked against a lamp post or plants. It is because the bicycle parking spaces are insufficient and not closed enough for residents. Thus by just increasing the number of bicycle parking is not enough. The parking spaces should be placed in a convenient location for residents.
Conclusion

Landlust has a high percentage of immigrants. Most of them are Moroccans (20%) and Turks (10%). Because of their religion, they have special cultural habits that are different to Dutch and people from the Western countries. They need communal spaces other than their homes to pray and for gatherings and parties. The ethnic groups are benefiting very little in the existing site. Nowadays, the integration of different ethnic groups is still a problem in Landlust. On the other hands, the dwellings in Landlust are generally too small nowadays. This should be improved without taking up extra public spaces. In conclusion, the design of public space of Landlust should accommodate the needs of the ethnic groups and minimum households. The residents should have places for gatherings and leisure activities that are free of charge or costs little amount of money. The facilities should be aimed at people from age 5 to 35 years. Communal spaces such as children’s playground are good places for ethnic groups to integrate with the society at an early age. Since youths are causing nuisance to the area now, the design of public space and the routing to green space should be designed to tackle with this problem. As suggested by Gemeente Amsterdam, the solution for the lack of maintenance of public space could be to raise the authority of residents to the public spaces. The public spaces should be more than green spaces. More recreational facilities should be added to the site. Bicycle parking spaces should be added at locations in close proximity of individual homes. All these public spaces should be easily accessible by residents and pedestrians. This would increase the surveillance on the public spaces. The safety and participation in these spaces would be raised.
PRELIMINARY DESIGN
Reflections and Starting Points for Design

The combined results of the analyses in previous chapters summarize the essential qualities of this housing monument in Landlust. The theories of different urbanists, architects and other authors allowed me to look at the characteristics in the public spaces of the site critically. The outcomes give me insights about the core design concepts.

As a municipal monument, the housing complex has many precious elements that should be preserved and enhanced during restoration. The most significant characters of the site are the urban morphology, public greeneries and building forms. The morphology of Landlust is an important historical trace of the development of Amsterdam West. It is also remarkable in architectural history that experimental strip housing was planned instead of the traditional closed blocks. The greeneries around and within the site reveal the concept of the General Expansion Plan (AUP) in Amsterdam West in 1935. Nowadays, green spaces in Landlust still have big impacts to the residents, the environment and the Municipality of Amsterdam. Although there are problems to be solved in the public spaces of Landlust, the public and semi-public areas have a lot more strengths than the private spaces in Landlust. This is largely because of the interior of most dwellings are no longer authentic and the insulation, noise control, and sizes of the dwellings are not sustainable for the future.

As concluded in the core chapter of this research report, diversity and complexity should be added to the public and semi-public spaces in Landlust. Theories have proved the need of diversity in public program and unique characters in the landscape parks. The research on the demands of the current society in the last chapter shows that the additional programs should be oriented to the cultural habits of ethnic groups and the possibility to promote integration. The new design should provide flexible spaces for leisure activities, in particular for youth people and children. These requirements shall be achieved by means of architecture. Accessibility and circulation between private and public, outdoor and indoor spaces are factors that regulate the visual and physical connections between the collective spaces and private spaces. The balance between essential privacy of individuals and social contact among the neighbours is one of the most challenging tasks in the upcoming design process.
Design Goal

Landlust as a municipal monument should be preserved and transformed into a vibrant community for young people and the future generation with a diversity of green and recreational spaces. The dwellings should be sustainable and comfortable to live in with private outdoor spaces for each household in order to add more unique characters to this housing monument. The semi-public spaces in Landlust should be maintained and regulated by residents using the opportunities provided by new architectural designs. The courtyard should be connected as part of the public streets to be used by the public in a safe manner. The new design in all scales should be cohesive with conclusions made in previous research and value assessment of the existing site.

Vision
The dwellings should be bigger for young people and families. Each balcony should have more personalized characters. Residents are given authority and freedom with their own outdoor spaces. Climate control and ventilation should be improved.

Vision
The greeneries could be enhanced in different ways. More communal spaces with different sizes and uses should be added, especially smaller gathering spaces for ethnic groups. More recreational spaces with furnitures and shelters should be added. The circulation routes should be rearranged to better connect the private and public spaces.

Vision
The public streets should be safe and used frequently by the public. Program on the streets should be reconsidered, including the traffic roads, pedestrian paths and building entrances.
**Design Variant 1**
Extended balconies and diverted views

**Goal**
The size of the balconies is increased. Private outdoor space becomes bigger. The views through the windows are diverted to the trees and the courtyard instead of the opposite block.

**Existing**
Views to the green surroundings are positive features of this housing monument. The existing views to the courtyard could be improved. The blue canvas was added to the balcony of each unit to avoid being overlooked by residents living on the opposite block. The transparency of the canvas is very low. It reduces the amount of sunlight entering the interior of the dwellings. It blocks view from the indoor to the courtyard. It looks old and dirty.

**Future**
Views to the courtyard is diverted at an angle in plan so that problem of overlooking is solved. The existing balconies are replaced by bigger ones. It allows residents to create their own personalized balconies. It protects the privacy of each family and increases amount of outdoor private space at same time. The balconies remained private where the residents have full responsibility to take care of their own outdoor spaces.
**Design Variant 2**
Extruded private spaces and pocket spaces

**Goal**
The size of the balconies is increased and the shape is changed to be more functional. The extended spaces could be outdoor or indoor. The negative pocket spaces created by the alternative extruded spaces become the private gardens where residents have freedom to decorate and grow their own plants.

**Existing**
The existing balconies are very wide but short. The uses are limited. The balconies are not weather-proof. The average size of all dwellings is approximately 50m². It is too small for families with one or more children.

**Future**
The interior of the each dwelling is expanded outwards to the streets and courtyard alternatively. This creates pocket spaces for each dwelling where these spaces could be used as private gardens or multi-functional spaces such as small grocery shops, small second-hand shops, painting corners, etc.
Reference
Housing Transformation, Saint-Nazaire, France (2014)
Lacaton & Vassal
Design Variant 3
Recreational spaces

**Goal**
More public spaces are used for recreational purposes, including gardens, gathering spaces, sports and cultural venues. Small communal spaces are connected to the circulation routes and can be seen clearly from all directions due to safety reasons.

**Existing**
The housing monument is missing spaces for recreational purposes. The courtyard is the only space in the complex where the residents can do some sports and relax. But they are not used due to various reasons, mainly caused by the existing problem in circulation routes.

**Future**
The places for recreational purposes could be integrated with new circulation routes. These spaces do not have to be big. The small communal spaces can be used as gathering places for groups of people, i.e. the ethnic groups or youth. The existing flat roof top could be turned into semi-public spaces for recreational purposes. To ensure the safety of these places, they should be clearly seen by people from different directions.
Reference
Gifu Kitagata Apartment, Japan (1994)
Kazuyo Sejima, SANAA
**Design Variant 4**
Communal gardens and spaces

**Goal**
More but smaller communal spaces are needed for residents to meet their friends and neighbours. These spaces could be connected by ramps and stairs so that these spaces are watched by pedestrians.

**Existing**
The green is appreciated by the residents and it should be kept due to the high historical and aesthetic values. The amount of green in the courtyard is adequate but the courtyard has been abandoned due to restricted accessibility and lack of diversity in uses. The courtyard is a monotonous open space which does not provide any privacy to the users.

**Future**
The central spaces between two building blocks can be connected in some ways to form small communal spaces which are needed by the ethnic groups for gatherings. These spaces should be equipped with sitting benches and trees for shading so that people can stay there for few hours or half-day.
Reference
8 House, Copenhagen (2010)
BIG
Design Variant 5
Elevated paths and gardens

**Goal**
New circulation routes with bridges and elevated walkways linking each dwelling to the public street.

**Existing**
The existing dwellings are too small for families. Two or more dwellings can be combined to form a bigger unit.

**Future**
A new circulation route that includes bridges, elevators and stairs replaces the original dark scissor staircases. The original stairs can be transformed into part of the dwellings as extensions to increase the dwelling size. The elevated paths allow sunlight to reach the lower levels and the courtyard. The outdoor routes in the central space between two buildings allow the paths to be watched by all residents to ensure safety and foster contacts between neighbours.
**Design Variant 6**
New access routes to the courtyard

**Goal**
More connection between the public streets and courtyard to increase the usage of the courtyard and to allow views to the courtyard. More program should be added in the public spaces in Landlust.

**Existing**
The existing courtyard is separated from the public pedestrian roads completely by the building blocks. This creates deadends in the courtyard.

**Future**
The courtyard should be opened to public access so that more people living in the neighbourhood can use it. The safety is regulated by the people who walk pass and residents who live above. More diversity should be included such as shops, exhibition spaces and sports facilities.
Design Variant 7
Complexity in the landscape of the courtyard

**Goal**
A more complex landscape is built in the courtyard to generate more interesting spots and a more beautiful backdrop for this housing monument.

**Existing**
The existing courtyard is a completely flat ground. It lacks of attractive characteristics. The sceneries in the courtyard are repetitive and monotone.

**Future**
A more complicated landscape with ups and downs form spaces of different sizes. These spaces could be treated as small gathering spaces with the small hills acting as a boundary. The hills are nice places to sit.
INSPIRATIONS AND BUILT EXAMPLES
Inspiration Images

**planting on corridor**

Apartment Building Emmy Andriesse, IJburg, Amsterdam, 2012

**personalized balconies/corridor**

Apartment Building Emmy Andriesse, IJburg, Amsterdam, 2012

**outdoor plants for basement**

Stacking green, Vietnam, 2012

Park Royal Hotel, Singapore, 2013
[http://s.wsj.net/public/resources/images/OB-XS998_STAYS0_G_20130606061035.jpg](http://s.wsj.net/public/resources/images/OB-XS998_STAYS0_G_20130606061035.jpg)

Sportplaza Mercator, Amsterdam, 2006
Inspiration Images - Corridors with plants

Apartment Building Emmy Andriesse, IJburg, Amsterdam, 2012

Inspiration Images - Atmosphere

Park Royal Hotel, Singapore, 2013


http://www.tripadvisor.com/Hotel_Review-g294265-d3523347-Reviews-PARKROYAL_on_Pickering-Singapore.html#photos

http://r-ec.bstatic.com/images/hotel/840x460/403/40355814.jpg
Inspiration Images - Top floors units with skylights

Green Edge House, ma-style architects, Japan, 2013

http://www.archdaily.com/199755/stacking-green-vo-trong-nghia
Inspiration Images - Ground floor circulation

Kipstraat and Pannekoekstraat, Rotterdam

Kipstraat, Rotterdam

Pannekoekstraat, Rotterdam

Pannekoekstraat with shops, benches and trees for sunshading
Inspiration Images - Experiment project

Hoogvliet for Wimby! (Welcome to my backyard), Rotterdam, Krill Architects (Harmen van de Wal / Michiel van Dorst), 2004

It is a design for post war gallery flat apartment buildings. It gives the inhabitants the opportunity to meet or not meet each other, thus enabling their own free will in their privacy management.

http://www.krill.nl/en/hoogvliet/
Inspiration Images - Green roof

Example: ACROS Fukuoka Building, Japan, 1995

Its most interesting feature is its 'step garden' - an unusual rooftop garden that runs from just above ground level to the top of its 14 above-ground storeys (four storeys are located underground).

One of the biggest rooftop gardens in the country, the green space has a significant impact on the building’s carbon footprint and indeed the local environment of the building; the vegetation and soil reduces the temperature of the building, cuts CO2 emissions and also produces an insulating effect.
Materials for stairs

Skanska’s Väla Gård offices in Helsingborg, Sweden

The Patrick Veillet Studio in Paris - glass and black iron framework and balustrade

Materials for stairs

Skanska’s Väla Gård offices in Helsingborg, Sweden

The Patrick Veillet Studio in Paris - glass and black iron framework and balustrade

Skanska (http://www.skanska.com/

Patrick Blanc (http://www.verticalgardenpatrickblanc.com/realisations/paris/patrick-veillet-studio-paris

Mark Cocksedge

Examples

Schutterstraat, Delft

Characteristics
- semi-public corridor outside the building
- the stairs are also outside the building at two ends
- entrance for every flat is through the balcony
- each balcony is connected to the corridor by bridges
- voids on each floor allow sunlight to enter the lower floors
- columns and additional structures support the corridor
- the outdoor space is covered with glass wall and glass roof
Examples

Alverstraat, Hoogvliet, Rotterdam, VMX Architects, 2007

post war qualities - strip of terraced houses

bridge linking the strips

http://www.vmxarchitects.nl/project_25.html

exterior space for everyone

section

http://simbiosisgroup.net/29170/hoogvliet-vmx-architects-the-netherlands
Examples

Alverstraat, Hoogvliet, Rotterdam, VMX Architects, 2007

Ground Floor Plan
- opposite facing buildings
- one side = traffic, one side = gardens

First Floor Plan
- semi-public corridor with entrance to the apartments and terrace

Unit Plans
http://www.rotterdamwoont.nl/images/uploads/cc81509a8c08662a6ca42e-810b6dd70.pdf
http://www.vmxarchitects.nl/project_25.html
Plants in the Netherlands

The landscape should be distinctive from other places within the same area. A good landscape is comprised of interesting features. Adjacent scenery greatly enhances the visual quality of a landscape. A variety of vegetative types is required as expressed in interesting forms, texture, and patterns with one or more major types. (2011)

![M. Sinensis](image1.jpg)  ![V. virginicum](image2.jpg)  ![Oak Trees/Birch](image3.jpg)  ![Linden](image4.jpg)  ![Low-maintenance Climbing Plants](image5.jpg)

It *shines* in late summer and autumn sunlight. It turns buff-brown and then *fades to silver*. It forms a fine-lined sketch that *moves and trembles* in low winter light. Grows up to 1.5m, Cut them all back to ground level in late January.

Veronicastrums are under-used plants. All have whorled foliage topped by upright flowers. ‘Lavendelturm’ provides branched flower heads held on stiff stems in shades of *lavender-blue*.

Veronicastrum *virginicum* are under-used plants. All have whorled foliage topped by upright flowers. ‘Lavendelturm’ provides branched flower heads held on stiff stems in shades of *lavender-blue*.

Oak trees thrive in dry summers and wet winters. The large oak tree requires a lot of space. Avoid planting the oak tree over a septic tank or underground utilities. *Shelters for sun and rain.*

Trees you will find mostly in *parks and along roads*. Reaching typically 20 to 40 metres tall.

Low-maintenance Climbing Plants

They hardly require any growth supports and minimal maintenance during the establishment period. Watering is rarely required. After approx. 5-10 years, it is time for the first trim.

**Top ten plants of the Dutch wave, The Telegraph, 2016**
(http://www.telegraph.co.uk/gardening/gardeningpicturegalleries/8022786/Top-ten-plants-of-the-Dutch-wave.html)

**Trees in Dutch North Europe**
(http://www.bomengids.nl/uk/bosbomen.html)

**Visual Impact Methodology Report, the Scenic Quality Inventory and Rating Chart, Bureau of Land Management.**
(2011)

http://www.fassadengruen.de/eng/uw/climbing_plants/uw/greening/greening/labour-workload.htm
Plants in the Netherlands

Sight - colour of flowers, the shape of leaves or patterns of light and shade

Touch - soft, smooth and silky or rough, spiky and even sticky

Smell - beyond plants, other materials have interesting smells, eg wood shavings, cut grass and damp autumn leaves

Sound - Tall grasses and fine-leaved trees make a lovely rustling sound, even in gentle breezes

Taste - Fruit and veg are the obvious contenders, also plenty of edible flowers and leaves

Yellows provide the golden thread to spin through the tapestry of purple and pink. A refined golden rod spills out almost horizontally in September. Two heliopsis will also add small, brasher, yellow flowers in August.

Echinaceas provide the wow factor from July until autumn. It has bright pink flowers with broad middles held on thick, dark stems. It provide a mix of pinks in varying heights. Echinaceas, adored by butterflies and bees.

This thick-stemmed, 1.8m-high rich blues aconitum glow like evening stars in the late border. The azure-blue flowers emerge in early October, framed by glossy foliage.

These stiff-stemmed plants have punkish flowers that emerge from a pepper pot head. Heights vary. The bracts supporting the flowers are a deep sooty purple.

Stiff, dark stems of whorled leaves are topped by fluffy, 8in-wide purple-to-pink flower heads. These hover at 8ft, attracting butterflies and picking up the colour of grasses with pink or purple tones.

REFERENCES
Literature


Website


Images, Diagrams, Drawings sources not listed here are photographs and images made by me

fig 8-1, 9-1, 9-2, 9-3


fig 18-1, 18-2, 21-1, 21-2, 21-3, 41-1, 41-2, 42-2, 48-1

fig 44-2, 47-2

fig 51-1

fig 49-2, 49-3, 55-1, 55-2

fig 74-1

fig 74-2

fig 47-1

fig 67-1, 68-1, 68-2, 69-1, 70-1, 70-2, 70-3, 70-4, 71-1, 72-1, 72-2, 72-3, 72-4

fig 40-1, 65-1, 65-2, 75-1
<table>
<thead>
<tr>
<th>Key factors</th>
<th>Rating Criteria and Score</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landform</td>
<td>High vertical relief as expressed in prominent cliffs, or massive rock outcrops, or severe surface variation or highly eroded formations including dune systems; or detail features dominant and exceptionally striking and intriguing such as inselbergs.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Steep canyons and 'kloofs'; or interesting erosional patterns or variety in size and shape of landforms; or detail features which are interesting though not dominant or exceptional.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features.</td>
<td>1</td>
</tr>
<tr>
<td>Vegetation</td>
<td>A variety of vegetative types as expressed in interesting forms, textures, and patterns.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Some variety of vegetation, but only one or two major types.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Little or no variety or contrast in vegetation.</td>
<td>1</td>
</tr>
<tr>
<td>Water</td>
<td>Clear and clean appearing, still, or cascading white water, any of which are a dominant factor in the landscape.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Flowing, or still, but not dominant in the landscape.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Absent, or present, but not noticeable.</td>
<td>0</td>
</tr>
<tr>
<td>Colour</td>
<td>Rich colour combinations, variety or vivid colour; or pleasing contrasts in the soil, rock, vegetation, or water.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Some intensity or variety in colours and contrast of the soil, rock and vegetation, but not a dominant scenic element.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Subtle colour variations, contrast, or interest; generally mute tones.</td>
<td>1</td>
</tr>
<tr>
<td>Influence of adjacent scenery</td>
<td>Adjacent scenery greatly enhances visual quality.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Adjacent scenery moderately enhances overall visual quality.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Adjacent scenery has little or no influence on overall visual quality.</td>
<td>0</td>
</tr>
</tbody>
</table>

Scenic Quality Inventory and Rating Chart
Derived from The Visual Resource Management System, Department of the Interior of the USA Government, Bureau of Land Management.