Learning from a building

The Garden Museum

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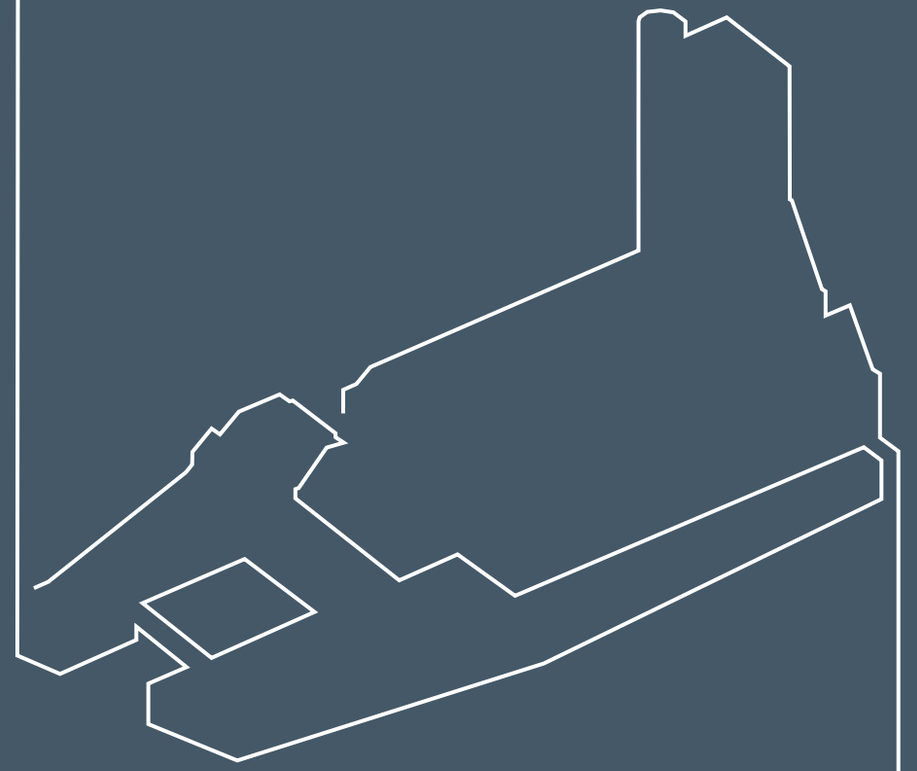

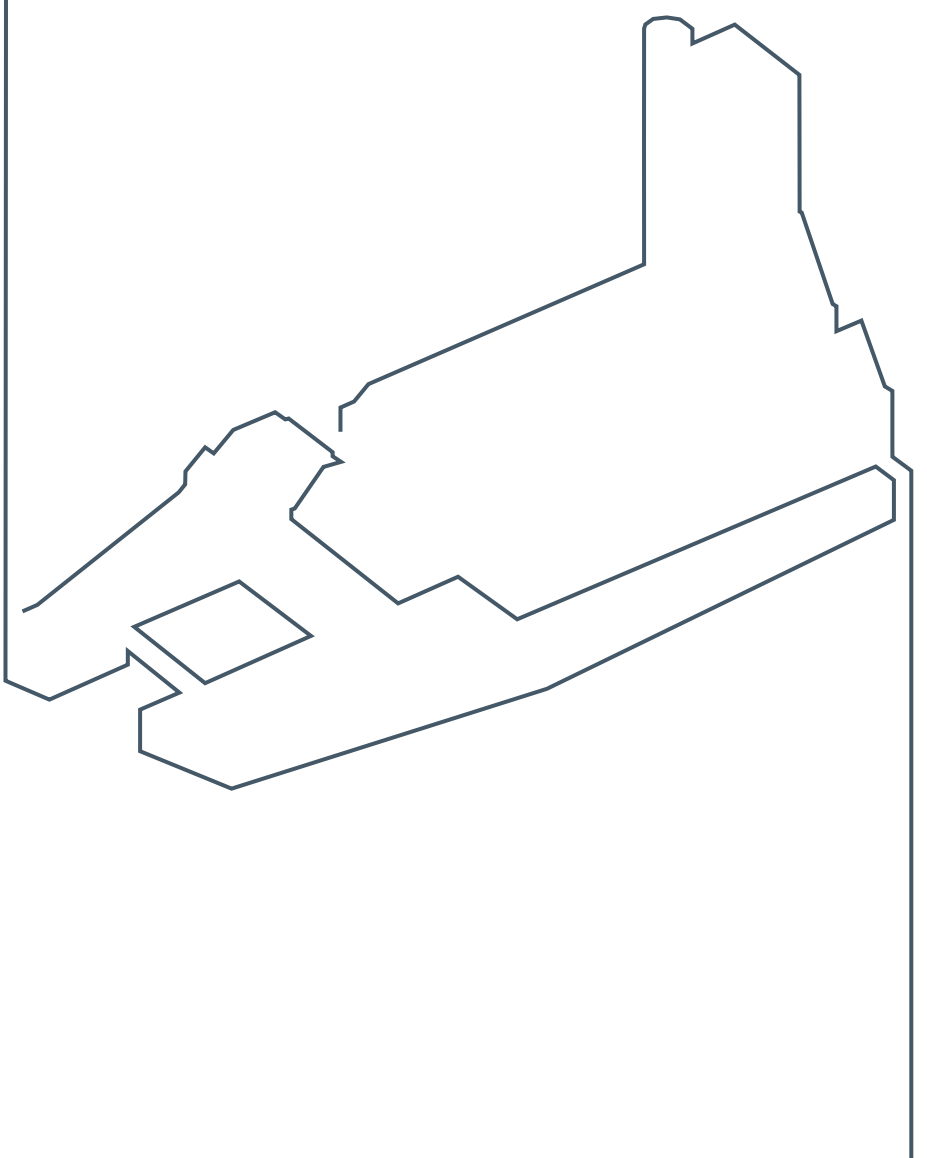

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Master program	Architectural Urban Design and Engineering
Graduation studio	Masterly Apprentice II
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Learning from a building

Graduation Studio “Masterly Apprentice II”

Abstract

Martine van der Ploeg

This project is part of the Masterly Apprentice studio at the Technical University of Eindhoven. It studies the subject of reacting to a building. This is done by a collectively written essay about the process of reacting, an analysis of The Garden Museum and a design proposal for the redevelopment of The London Fire Brigade Headquarters. It includes interviews, literature research and a site analysis.

The process of reacting consists of 4 aspects, namely: experiencing, interpreting, defining and critiquing. Those aspects can happen either subconsciously or consciously and result in a reaction in the form of, for example, a feeling or a written piece of criticism.

The design for the Garden Museum by Dow Jones Architects consists out of an inside addition and an outside extension to the old church of St. Mary of Lambeth in London. It is based on 6 key points: context, material, typology, layering, framing and buffer.

These themes are critically turned into guidelines for the design of a Ronald McDonald House in the Drill Tower of the London Fire Brigade Headquarters. Besides, an urban proposal of the redevelopment of the whole complex is done.

Content

Introduction

to a Masterly Apprentice project

Study, learn and master. Become inspired by previous generations, learn their lessons and shape those to grow into your own ideas.

The 'Masterly Apprentice' studio guides its students to becoming an architect. This graduation studio of the Technical University of Eindhoven focuses not only on learning from previous generations of architects, but also on learning from previous generations of students. The main idea of the studio is to learn how one could use lessons learned from others. In this ongoing studio, every quartile a new generation of students starts by individually analysing a building and finishes with critically turning that which is learned into a personal design. Every generation gets assigned an overall theme, within which they will perform a collective research, published in the form of a written essay.

This booklet, the first of two, is part of the 7th generation of the 'Masterly Apprentice II'. It is a written explanation of a graduation project within the theme 'Building upon Building'. In this first part, The Garden Museum by Dow Jones Architects is analysed. This includes a site analysis, a study of the design of the building and an interview with Alun Jones. In order to learn to look at detailling, lighting, materialisation and composition, a picture of the building is remade. This booklet, 'Learning from a building', is the foundation of part two, 'Design of a building'.

The process of reacting

Essay

The process of reacting

by F.K. Abdullaa, J.H.A. Heeren, F.M. Margry, M. van der Ploeg, A.G.W. Rutten, G. Tommasi, S.E. Visscher

"Feelings of misery and doubts about the essence of life arose during a rainy and cold day of sketching in a gothic church surrounded by a graveyard in Ghent. At night, people broke down in tears." (Visscher, personal communication, February 14, 2019)

When reacting, several aspects are to be distinguished, although they cannot be separated. As Sebastian Visscher experienced, a first reaction happens in a split second. Most of the time, this is in the form of a feeling or emotion. After reflecting, a secondary reaction can occur. Even though the first reaction happens subconsciously and the second one intentionally, the process is the same.

In this essay, the different aspects of the process of reacting will be explored, namely: experiencing, interpreting, defining and critiquing. These aspects form a continuously interacting course of action. As a source of inspiration for this essay, the book 'Building upon Building' is used. In this book 45 architects describe their reaction to an existing building, in the form of a fictitious addition design. The expectation is that it could be very useful for an architect to be aware of the aspects of reacting, in order to optimize their design for the user or the client.

Experiencing is the outcome of our perception through senses. This is depending on our neurobiological system and emotions, influenced by memories and previous experiences. This will be referred to as one's inferential network ("Experiencing", n.d.). Experiencing is both the natural response to a specific environment, full of visible and invisible physical stimuli and phenomenons and the feelings raised by specific situations and places. Traumas as well as beautiful recollections can influence the perception of spaces (Solomon, 2019).

In architecture, in the perception of spaces, all senses are relevant. Therefore a sensitive architectural project dives into the different perceivable qualities that may influence the experience of the building (Eaton, 2005). The experience of a building changes not only according to the architectural properties of a building, but also to the space in which the architecture is placed. The context is not an empty container for architectural artifacts. It is a complex system that continuously interacts with the object in the space. Natural and artificial elements play together to enrich the architecture of those sensory nuances that denote our experience. Experiencing is therefore the feeling that comes from the totality of characteristics of a specific moment in a definite space.

Experiencing is a subconscious activity and can be understood through interpretation, by giving personal meaning to these perceptions. Experiencing and interpreting are both unintentional activities, distinguishable but not separable. Research indicates that architects and non-architects do interpret architecture differently where education and experience as variables contribute to these differences. (Hershberger, 1988). This implies that, along with experiences and memories, education is an important part of the inferential network.

When experiencing a building, one could get different thoughts and feelings. According to Grootveld (personal communication, November 16, 2018) these thoughts and feelings happen partially in the subconscious state of mind. The brain links the things seen or felt to things or situations experienced before, resulting in a thereby influenced reaction.

Defining a space is an activity by which the character of a space is determined. This character results from the composition of elements that are physically present and the symbolic meaning that is given to them by humans (Hillier and Hanson, 1997). Therefore the definition of space starts with identifying the architectural elements that are physically present, without their symbolic meaning (Suvanajata, 2001). This structural analysis of a space is favored to understand the space and is also known as Space Syntax as described by Professor Bill Hillier (University of London) and Julienne Hanson (Hillier and Hanson, 1997). All physical elements have a certain relationship to each other, resulting in a certain system of which that specific space is composed (Hillier & Hanson, 1997). Firstly, these systems are described from a functional and practical point of view. The architectural elements and the materials shape the space. Secondly these systems also have a symbolic meaning which is described as the social use of the space. This is defined by the activity that is taking place in that space, which is influenced by the cultural identities. It is the presence of these systems within spaces that makes buildings more than merely objects. These processes of understanding the functional and symbolic meaning of space finally determine the experience of a certain space.

Defining an experience is done in a similar constructive way as defining a space. Firstly, one defines what is experienced and felt. This is followed

by defining what is meant by this feeling and why this experience is interpreted in a certain way. This definition will relate to the space and the way it is constructed, but also to the meaning one gives to it. It is important to notice that the processes of defining the space and defining the experience do not happen in a specific order.

During a first reaction, which happens in a split second, all four aspects of reacting happen subconsciously. This is already expressed in a certain form of critique, by an opinion, a thought or a feeling. In this case, creating an opinion is related to a certain experience and the thought that arose with it. But only when, later on, one reflects upon these aspects, this experience or feeling can be critiqued thoroughly. After evaluating the reaction, a thought can be explicated. The explication evaluates why a certain thought emerged and why it causes a particular reaction. The experience can be critiqued differently when one is aware of the aspects of the reacting process. The inferential network influences the way of critiquing and the result of it. This can lead to a different response compared to the first reaction, which appeared more subconsciously than this second reaction. Besides critiquing the aspects of reacting and reflecting to the emerged feeling or thought, the reaction itself can be critiqued as well. These two critiquing moments can be used to evaluate the first reaction and create a second, more intentional reaction.

Architecture and design critic Alexandra Lange (Hosey, 2017) explains that a description of the things you have experienced is a good technique to use when critiquing architecture. It allows people to imagine themselves at that place and see the things through the critic's eyes. In the same article, Blair Kamin states that architecture and architectural criticism affects everyone. It not only affects architects and their clients, it

needs to be understandable to everyone. Sorkin (Hosey, 2017) confirms this by calling criticism 'a service profession', whereby architecture can bring positivity to society and even to the wider world.

This essay explains different aspects in the process of reacting . These aspects can be distinguished from one another, but they cannot be separated. Experiencing, interpreting, defining and critiquing all happen naturally. Not as consecutive steps, but simultaneously and back and forth to come to a reaction. The process of reacting usually happens subconsciously. That is when the first reaction happens, in the form of a feeling or emotion. When reflecting upon this reaction and intentionally looking at these aspects of the process of reacting again, a secondary reaction takes place. This secondary reaction reveals itself in different forms depending on the person. A writer can express his reaction to an experience in a written piece for example. A painter can make a painting and an architect can express his reaction to a certain place by a design. The architect has a vision of how his design will work and how it will be experienced by others. When he understands the aspects of his own reaction clearly, he can use them to steer his design towards that vision. He will be able to create the design he intends to. Therefore it is important to be aware of the aspects of the process of reacting and reflecting on them.

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The Garden Museum

Dow Jones Architects

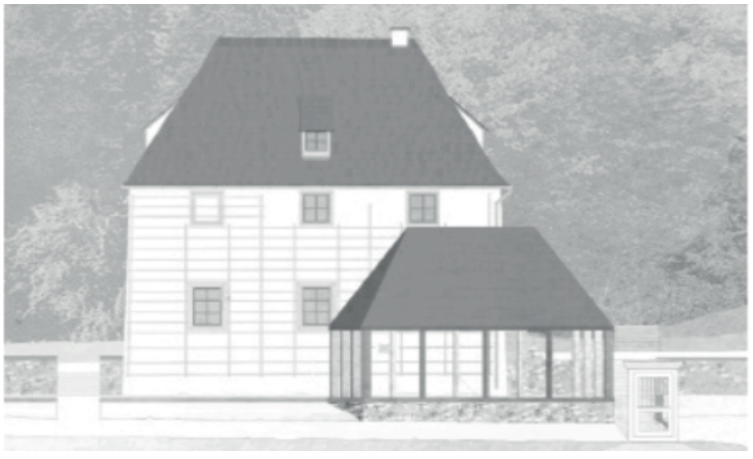

Figure 1: Buildings chosen by the 7th generation of Masterly Apprentice students. Proposals by (left to right, top to bottom): AMUNT, Stephen Bates, Bedaux de Brouwer, Monadnock, Robbrecht&Daem, De Kort van Schaik, Dow Jones Architects (Engels & Grootveld, 2015).

Building upon Building

The 7th generation theme

The general theme for the 7th generation of the graduation studio, is the book 'Building upon Building'. The book consist of a collection of reactions to existing buildings, in the form of a design proposal for an extension or addition. Where the studio focuses on learning from other generations of architects and reacting to that with a design proposal, the book describes how architects learn from existing buildings, and react to them. When one wants to consciously react to something, whether it is a building, a person, or anything else, one has to first fully understand it. This is done by studying it and learning from it. Because of this close links between learning from, building upon and reacting to, the theme suits the studio perfectly.

The students of the 7th generation each picked one architect from the book 'Building upon Building' and one specific project from their oeuvre to analyse, critique and use as a source of inspiration (Figure 1). For this research, Dow Jones Architects, who built upon to the Goethe Gartenhaus in the book, is chosen. This architectural office is selected because of their rather simple looking design proposal, which turns out to be impressively reflective of the environment and the Gartenhaus itself. With the use of present-day materials and style, Dow Jones Architects succeeds in the art of making something look like it belongs in its place and time.

The building that has been chosen to analyse, is The Garden Museum (Figure 2). Dow Jones' design for The Garden Museum includes an addition inside as well as an extension outside of the old church that hosts the museum. The building stands out because of its intriguing and unusual way of transforming a building. The delicacy with which the addition was put in and the extension was wrapped around the old church is immediately visible. Because of the tenderness in the design, the church is complemented in a respectfull, modest but still intruiging way.

Furthermore, the building perfectly suits the theme Building upon Building. Like the design proposals in the book, Dow Jones' design for The Garden Museum is a reaction to the old church. The interesting thing about transformation projects, is that there are always challenges. There are so many more things to take into consideration in comparison with building something completely new. It takes adaptive skills to be able to work with different existing buildings, which Dow Jones Architects shows to be capable of in its design.

Figure 2: The Garden Museum in the church of St. Mary (Coleman, n.d.)

Figure 3: Biba Dow (Dow Jones Architects, n.d.-b)

Figure 4: Alun Jones (Dow Jones Architects, n.d.-b)

The story of Dow Jones Architects

An interview with Alun Jones
(Based on and cited from personal communication, July 31, 2018)

Alun Jones and Biba Dow studied architecture together at Cambridge, after which they parted ways. Alun was working for Caruso St. John, and Biba was working for Powell and Moya, when they decided to establish Dow Jones Architects in 2000. The architectural duo has some very clear topics they try to address when designing.

"*What we're interested in, is trying to make all of our projects some sort of cultural response.*"

Dow Jones Architects always tries to find the essence of things, no matter if the project is a transformation of an existing building or a design for a new building. To answer the question of what a project *'wants to be'*, they first try to discover the central issue and then study how that issue participates in a cultural, historical, social or architectural conversation.

According to Alun, materialisation is something that can relate to such a conversation, for example by reacting to or using a local tradition. Biba and Alun like to challenge themselves by using very few materials, but getting the most out of them. This is inspired by the work of Donald Judd, a conceptual artist who's art was made with only one material per project.

When the architects of Dow Jones select a material to work with, they always think about how the materials fit in *"a broader conversation about the cultural impact of that building"*.

"One of our early projects, is a house which is just made out of clay and oak, for example. [..] The idea of the clay in that house was, it's in the east of England, where the land is very flat and there is a lot of clay. And, three miles from where we made the project, there's a brickworks. And we were excited by the idea that you literally scoop mud out of the ground, cook it, and then make a house out of it."

According to Alun, context has always been a central topic in the office, but the idea of this term has changed over time. Initially, they thought about context as *"thinking about how you can weave a building into a place"*. This main idea is still used by the office, but nowadays, they try to see it in a broader way. It is not only the project's surroundings, but economic and social issues are also included in the concept of context. Alun is convinced that context covers both the vertical and the horizontal spectra, being historical footprints visible in the layers of the earth as well as the present surroundings on ground level.

"A room in a house to have breakfast in, for example, probably wants to be in a different part of the house to a […] [room] you'll have dinner, because the sun has moved".

The office of Dow Jones architects thinks about situations when it organizes its architecture. Alun states that this is a matter of form relating to typology, which is the relation between form and use. Typology should not be confused with taxonomy, which is about classification.

“One of the things we’re interested in, is how architectural typology could relate to the essence of what things are.”

Also in the design for the Garden Museum Dow Jones uses the topics context, typology and materialisation. Besides those, Alun explains that layering, framing and natural light are important themes.

In the interior of the building, layering is done by the means of architecture. Outside, the garden is used for layering with nature. In order to emphasize this layering theme, framing is used. The visitors eye is directed towards different sceneries throughout the building. Layering and framing are both contributing to the architectural promenade of the building. *"It is about things unfolding as you move around them."*

Natural light is used to highlight the contrast between old and new. Dow Jones Architects has put rooflights everywhere their design connects with the church of St. Mary.

All of these keypoints used by Dow Jones Architects for their design of the Garden Museum will be further discussed and explained in the coming chapters. However, Alun assures, not everything is relatable to those design ideas. Sometimes it is just a matter of *'what's best'*.

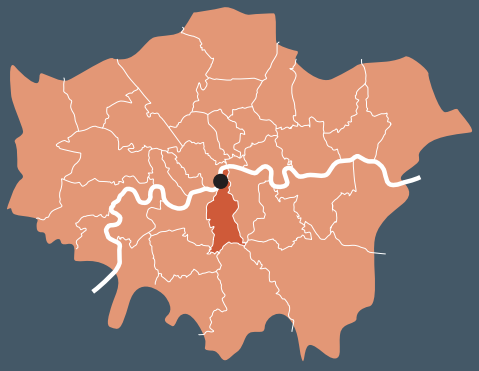

Figure 5: The location of The Garden Museum, Lambeth, London

Figure 6: The Garden Museum's extension to the old church of St. Mary (Coleman, n.d.)

A short introduction

to The Garden Museum

The Garden Museum is situated in the north of London's borough Lambeth, shown in Figure 5, in the church of St. Mary of Lambeth. The plot of the church is located north of the Lambeth bridge southern junction next to the Thames.

After approximately 40 years of operating, The Garden Museum initiated an architectural competition for a temporary exhibition space. After the winning design of Dow Jones was realised, the museum decided to stay located in the church and put up a big reconstruction project. This resulted in the current museum building, existing out of the old church, an addition put in the church and an extension wrapped around the church. The addition is partially made in Phase I and finished in Phase II of the design project, together with the extension. The most important goals for the design, were to have exhibition, educational and archival space, to restore the church and to connect the building with the city (The Garden Museum, 2017).

Nowadays, the museum exhibits gardening tools, displays paintings, hosts temporary exhibitions, offers two gardens and many things more.

Figure 7: Surroundings of the church of St. Mary before 1737 (Ryhiner Collection, n.d.)

Figure 8: Surroundings of the church of St. Mary 1889 (Chas E Goad Limited, 1889)

Figure 9: Surroundings of the church St. Mary around 1950 (Director General of the Ordnance Survey, 1951)

A historical context

of the church of St. Mary of Lambeth and its surroundings

Before the year 1737, there was only one way to cross the river Thames near the church of St. Mary of Lambeth, which was by horse ferry. There was a crossing point located right next to Lambeth Palace and the church of St Mary of Lambeth In 1737 the first plans for the Lambeth bridge were made, but the bridge wasn't built until 1862. Around 1932 the current Lambeth bridge was completed and opened (Roberts & Godfrey, 1951a). Somewhere between 1954 and 1958 the infrastructure in front of the church was changed. All these changes contributed to the current situation surrounding The Garden Museum (Figure 10).

Figure 10: The current situation of The Garden Museum

The church of St. Mary of Lambeth has changed substantially over time. In 1062, a wooden church was built by the Countess Goda (The Garden Museum, n.d.). In the 14th century, the church was rebuilt using flint and stone, and the body of the church was again rebuilt at the end of the 15th century and the beginning of the 16th century Philip Charles Hardwick designed the current body of the church in 1851. The tower, however, still remains from the 14th century (Roberts & Godfrey, 1951b).

During the following decade, several things were added to the church, and the damage of the Second World War forced some replacements. In 1972, the church became redundant and when Rosemary and John Nicholson visited the site in 1976, they founded the Tradescant Trust, to save the church, which was made ready for destruction at that time. The Tradescant Trust was established in memory of John Tradescant, gardener and plant hunter, buried in the yard of the church. After the Trust rescued the church's structure, the church of St. Mary became the Museum of Garden History (The Garden Museum, n.d.).

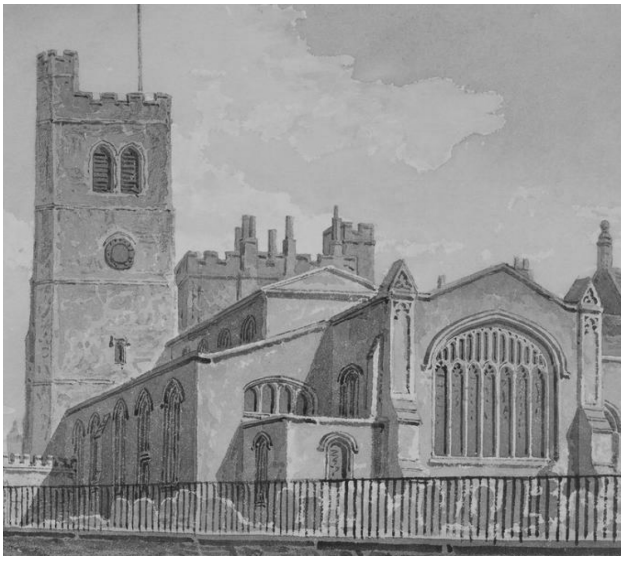

Figure 11: Church of St. Mary of Lambeth 1828 (Buckler, 1828)

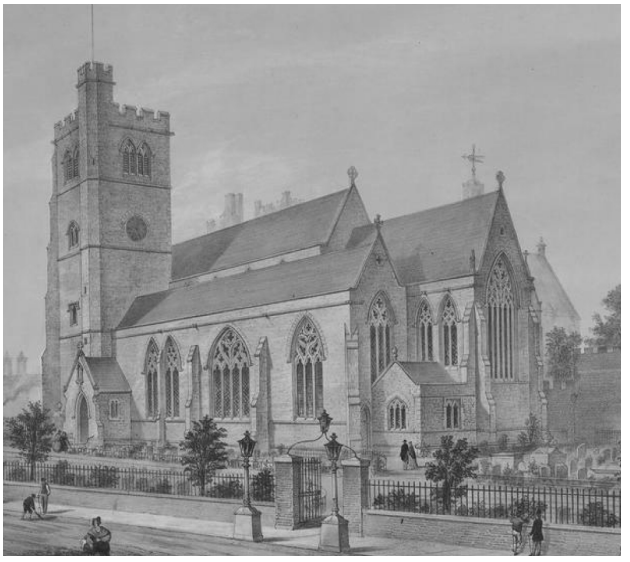

Figure 12: Church of St. Mary of Lambeth 1851 (Richardson, 1851)

Figure 13: Morton's tower (Britain Express, n.d.)

Figure 14: Lambeth palace (The Archbishop of Canterbury, n.d.)

Figure 15: Lambeth palace cottages (Williams, n.d.)

An urban context

of the church of St. Mary of Lambeth and its surroundings

The Garden Museum is surrounded by Lambeth palace in the north, its gatehouse Morton's Tower in the west and the Lambeth Palace Cottages in the east. In the nearby surroundings of the Garden Museum there is St. Thomas' hospital, the Ronald McDonald House and the former London Fire Brigade Headquarters. The Garden Museum has a view on the Palace of Westminster across the river Thames.

Figure 16: Important buildings in the surroudings of The Garden Museum

An important component in the surroundings of The Garden Museum is the river Thames. Noticeable are also the big plots of green in its surroundings, one of which being the Archbishops Park. This park is located behind Lambeth Palace and close to the church. The garden in front of the museum itself and the Victoria Tower Gardens across the Thames are important plots of green as well in this crowded part of London. There are some main traffic axes around The Garden Museum resulting in two big junctions, one on either side of the Thames. The railroads are connected to Waterloo Station.

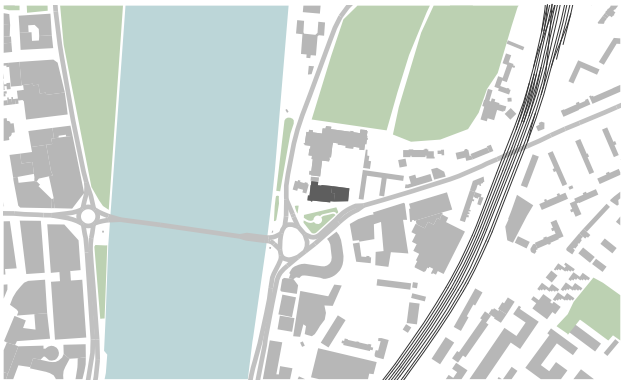

Figure 17: Green and water

Figure 18: Roads

The height differences, ranging from 0-8 meters, are mainly caused by the depth of the Thames. This results in an area that is rather flat. The sun rises at the Garden side of the Museum, and sets at the Church side. The south side of The Garden Museum has no neighbooring buildings, which makes it perfectly orientated according to the ecliptic. In this way, the sun can be optimally used.

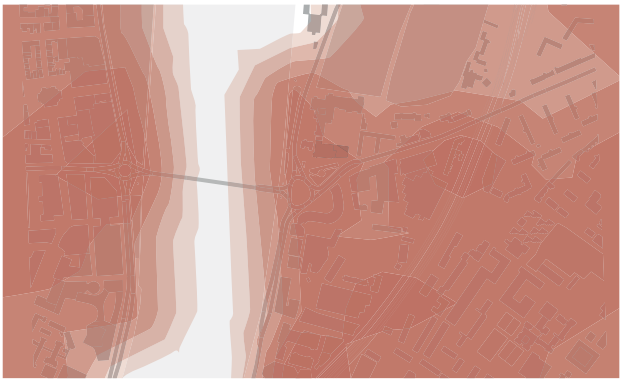

Figure 19: Heights

Figure 20: Sun

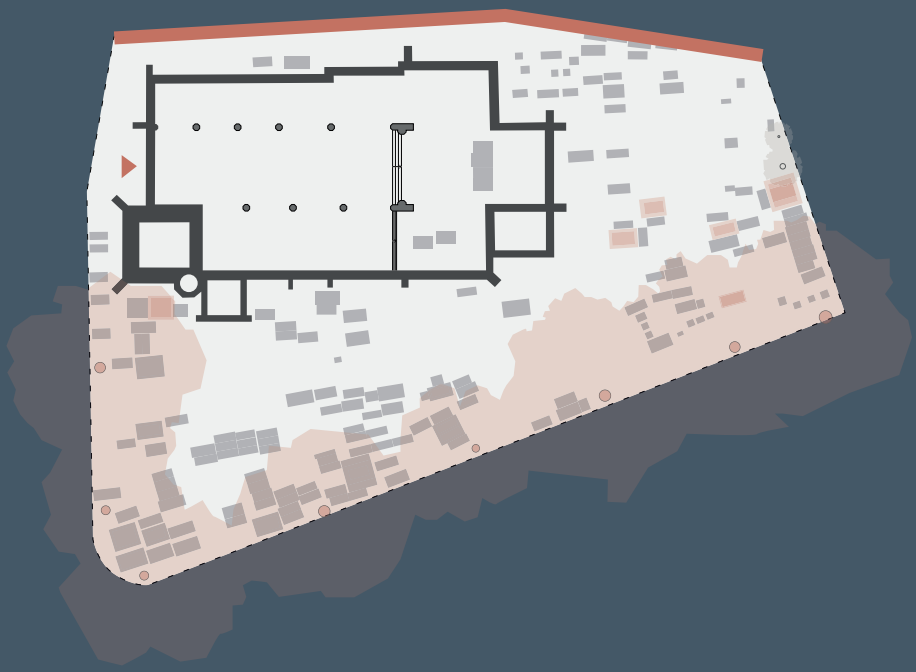

Figure 21: The old situation of the church of St. Mary of Lambeth, with an entrance in the west facade and the Lambeth Palace wall in the north. Protected trees and tombstones are in red. (amended from drawings retrieved from Dow Jones Architects)

Reacting to the church of St. Mary of Lambeth

A design of Dow Jones Architects

Before a response to the church could be provided, an analysis of the old situation was done by Dow Jones Architects. The entrance of the church is situated in the west façade. Around the whole plot, bodies are buried and tombstones are visible. There are monumental trees on the plot, and a couple of protected tombstones (Figure 21).

The design for The Garden Museum is made in two phases. In Phase I Dow Jones Architects started with the first part of the addition (Figure 22). Phase II included an expansion to this addition in the church (Figure 23), as well as an extension outside of the church (Figure 24). Noticeable is the tenderness with which the addition is put in and the extension is wrapped around the old church. This is achieved by creating the feeling that the new buildings never touch the old building.

In 2008, Dow Jones Architects executed Phase I of the church's transformation. The lightweight construction added inside the church, creates a public square in the middle. This is emphasized by completing the imaginary circle with the volumes of Phase II inside the church, realised in 2017. The Phase II extension, is built at the east side of the church. Resulting is the current version of The Garden Museum (Figure 25).

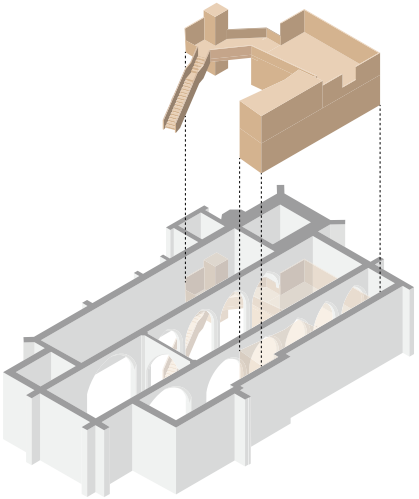

Figure 22: Phase I, addition

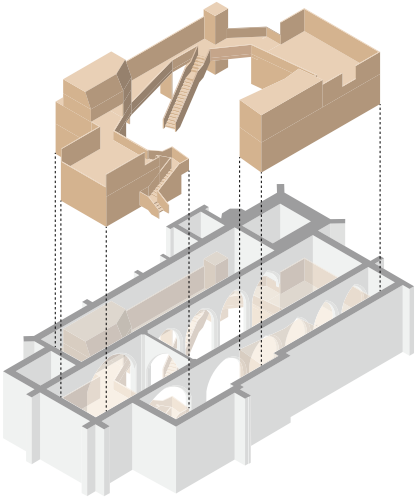

Figure 23: Phase II, expansion of addition

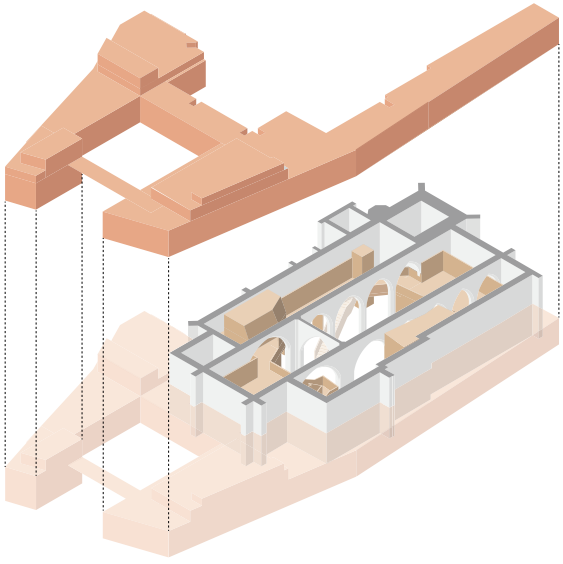

Figure 24: Phase II, extension

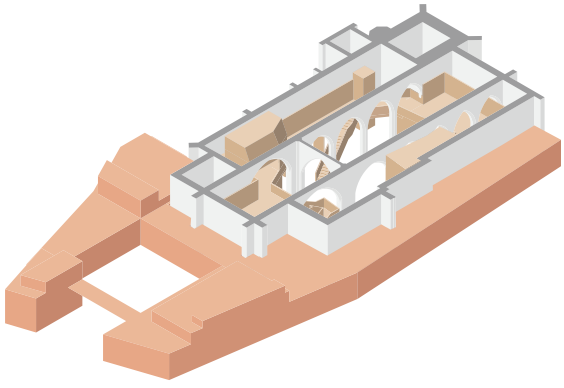

Figure 25: Final design

Figure 26: The new situation of The Garden Museum, with entrances in the south facade and the café and a visible Lambeth palace wall in the extension. (amended from drawings retrieved from Dow Jones Architects)

The new design of The Garden Museum has an entrance in the south façade, as well as in the cafe in the extension. The Lambeth Palace wall remains, being still visible on the inside of the extension.

Functions in the Garden Museum are offices, studyrooms, a café and a reception. The temporary exhibition space is located on the ground floor, while the permanent exhibition is situated on the first floor.

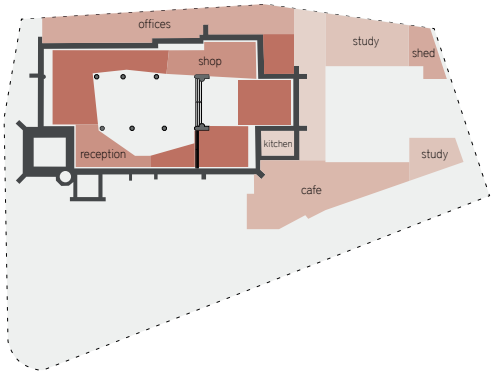

Figure 27: The new functions of The Garden Museum, ground floor

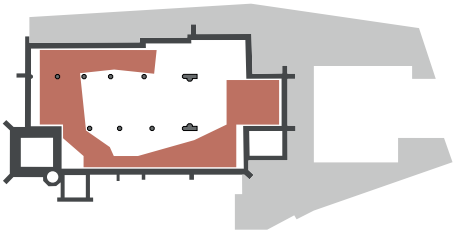

Figure 28: The new functions of The Garden Museum, first floor

The main ideas of the design, as described in The Garden Museum Journal (The Garden Museum, 2017), have been captured in small models, in order to be able to categorize and organize them. Step by step, the models go from exterior to interior (Figure 29).

The plot of The Garden Museum is closed in by roads and an old palace wall, which together create a malformed triangular shape. When this shape is abstracted, it is noticeable that the design of The Garden Museum follows this triangular shape (1). The buildings cladding reflects the museum's surroundings, because the bronze tiles represent the bark of the protected trees in the garden. In other words, the cladding acts like a mirror (2). The bronze tiles will age over time, by color and glossiness, so that the building will eventually blend with the city (3). The bronze tiles are used only for the extension, which is delicately wrapped around the church. The church is filled by the addition in a way that the old church is barely touched. By the tenderness with which the extension and addition are placed, the church serves as a buffer between the two (4). According to the architects, the addition and the extension are brother and sister, both made out of a light Cross Laminated Timber (CLT) construction, only the extension's construction is disguised by cladding (5). Both interventions embrace a piazza. In the addition this is a space with an urban character, while the extension embraces a space of nature. This results in a tension between the museum's civic interior, and natural exterior (6). These spaces create a play of diagonals and straight lines (7). On more detailed level, both the addition as well ad the extension are a patchwork of spaces (8).

Figure 29: Top to bottom, 1-9: Models of the main ideas of the design for The Garden Museum.

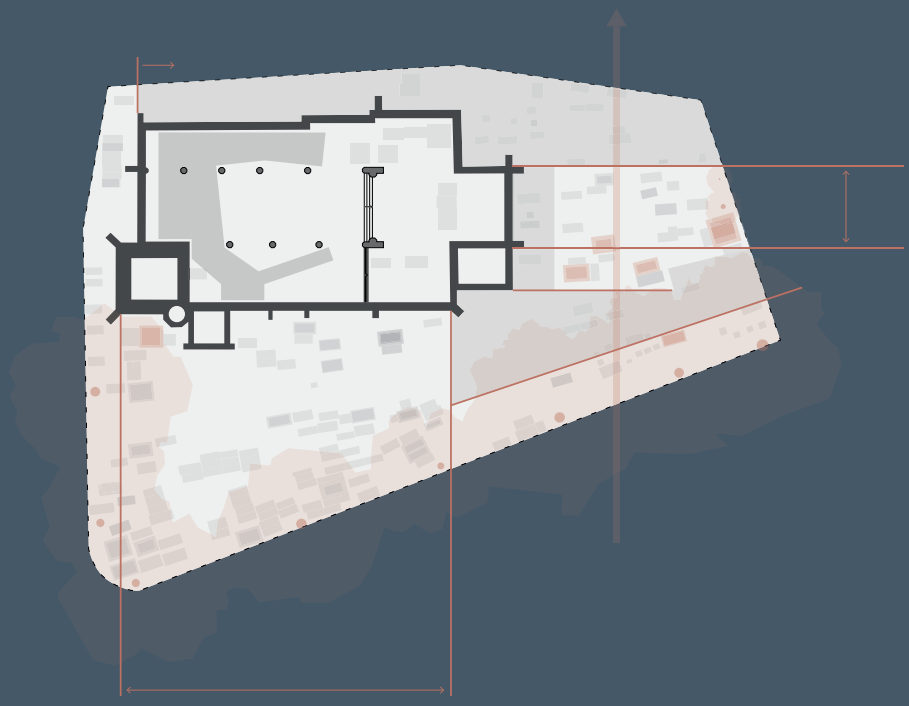

Figure 30: Determining the buildable area of the plot of The Garden Museum (amended from drawings retrieved from Dow Jones Architects)

Reacting to context

"Thinking about context is thinking about how you can weave a building into a place" (A. Jones, personal communication, July 31, 2018)

Thinking about context is one of the first things the office of Dow Jones Architects does when designing a building. Its about finding the essence of the building, but also about working with the limitations of the building. The Garden Museum had a lot of opportunities, but also many limitations. For example, there are a couple of protected tombstones, a protected view to Lambeth palace and nine protected trees on the plot. Furthermore, Dow Jones wanted to keep the south façade and a part of the east façade open and did not want to build in front of the west facade. The result was a certain buildable area where eventually the extension had to fit in. (A. Jones, personal communication, July 31, 2018)

"Together, the architects and gardeners are creating a new tissue that inveigles itself between the stone tombs and existing planting, including nine protected plane trees. The simple diagram of church plus churchyard becomes a field where inside and outside and new and ancient overlap." (Moore, 2017)

The extension is made out of three seemingly separated pavilions, connected by hallways. The pavilions are situated in a way that they each frame a specific view. Namely, a view to the city, the church and the garden. The reference for the shape of this extension was a cloister garden, being a garden surrounded by a cloister. There is a small kink in the south facade of the extension, because in combination with the reflection of the bronze tiles, the face plays with the light (A. Jones, personal communication, July 31, 2018).

For the design of the addition, the old church is being interpreted as its context. The main idea was to make a public square, referring to ancient cities, with a piazza in the middle and its shops around it. The main reason for this inspiration, is the fact that The Garden Museum used its space not only to exhibit things, but also to host activities. The addition's dynamic shape is based on the columns being off-grid. The 200 mm distance between four columns combined with 90 degree angles and parallels form the primary shape of the addition. Then the shape is tweaked to the principle of *'what's best'*; Looking at it and changing it until it feels right. That might mean that a design is not perfectly geometrically explainable. Jones likes to compare is to the architecture of Alberti, there is always something just off, which is exactly what makes it interesting (A. Jones, personal communication, July 31, 2018).

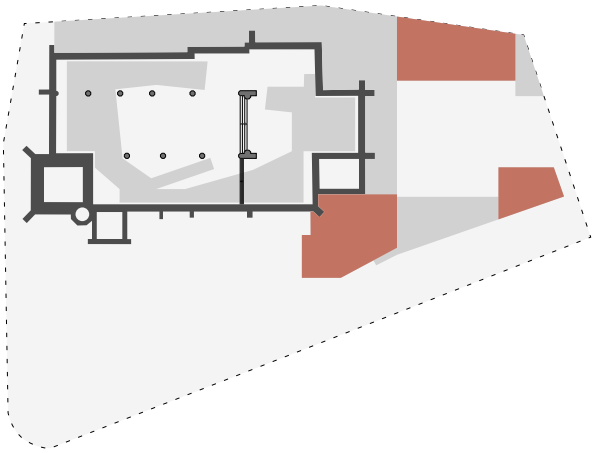

Figure 31: The extension exists of three, by hallways connected, pavilions

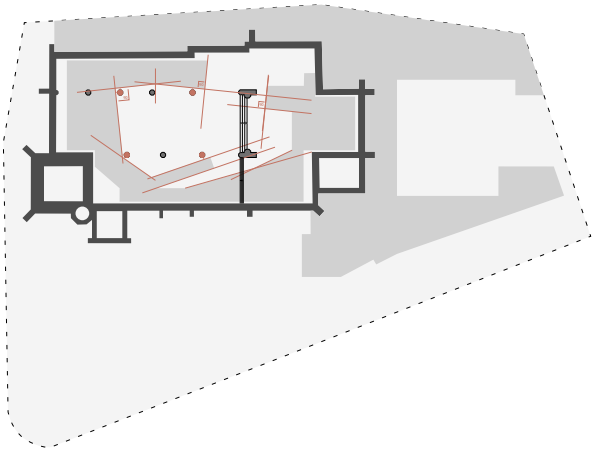

Figure 32: The shape of the addition is based on the columns of the old church, 90 degree angles and parralel lines

When transforming an old church and its yard, there is inevitably some delicacy needed. Because of that, one of the main limitations of The Garden Museum, the tombstones, were agreed to handle carefully by leaving them exactly in the same place. (The Garden Museum, 2017)

Jones explains how they managed to do that:

"*We achieved that by surveying, numbering and labelling every single tombstone. We lifted them all up, stored them carefully, made our building, and put them back exactly where they were, but incorporated them into the polished concrete floor. When you're in our building there's a very clear sense that the tombstones are drifting through the garden and they carry on drifting through our building.*" (The Garden Museum, 2017)

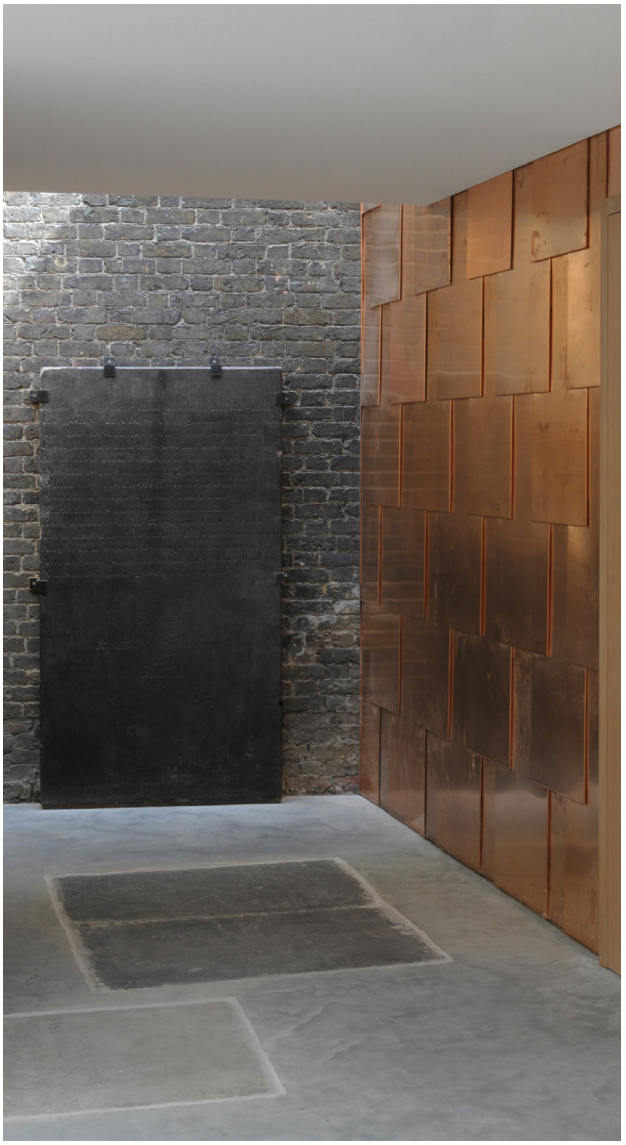

Figure 33: Tombstones in the floor of the extension (Grandorge, n.d.-a)

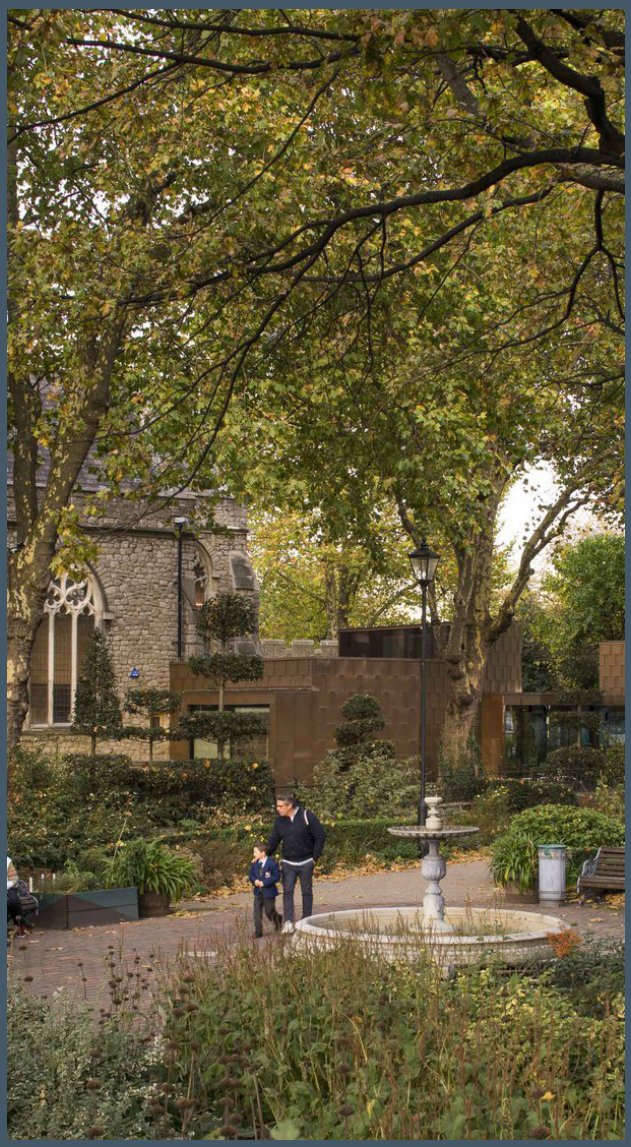

Figure 34: The bronze tiles reflect the bark of the trees (Dow Jones Architects, n.d.-a)

Reacting to and with materials

"A broarder conversation about cultural impact" (A. Jones, personal communication, July 31, 2018)

Jones (personal communication, July 31, 2018) always starts by asking himself the question: *"How does a material fit into a broader conversation about the cultural impact of that building."* The extension as well as the addition serve as a background to its surroundings. *"The elements act in sympathy, but keep their identity"* (Moore, 2017).

The extension is made of bronze tiles in a pattern that reflects the bark of the trees. The material ages when getting older, but it also ages due to weather circumstances. The bronze tiles in the interior are still bright and shining. However, the ones on the exterior are becoming more mat, and have different coloured because of placement in the sun or shadow (A. Jones, personal communication, July 31, 2018). Because of the mirroring of the trees, as well as the aging of the material, the extension starts to blend with its surroundings. It therefore starts to act as a background, making sure it doesn't overrule the beauty of the church.

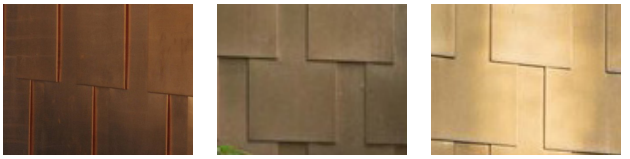

Figure 35: The bronze tiles age differently due to their placement (1: Grandorge, n.d.-a; 2&3: Coleman, n.d.)

The addition is made of whitewashed CLT. Dow Jones Architects selected this material for its light weight, but mainly because of the dialogue it enters into with the materialisation of the church: *"Inside the church the chunky timber structures create their own language - plain, bleached, unassuming - forming an almost puritan meander between the intricate Victorian gothic arches [..]"* (Heathcote, 2017)

The CLT complements the Kentish Ragstone and Limestone dressings of the church, without stealing its shine: *"The plain timber construction inside the church, which carries most of the exhibits on its (slightly crowded) upper deck, is, as Jones puts it, "robust enough to stand up to the church without having an argument with it""* (Moore, 2017).

Figure 36: Left to right, top to bottom:
1. Kentish Ragstone (Coleman, n.d.)
2. Limestone (Marble & Ceramic Corp, n.d.)
3. Concrete (Grandorge, n.d.-a)
4. Steel (Coleman, n.d.)
5. Bronze tiles (Coleman, n.d.)
6. CLT Whitewash (Dow Jones Architects, n.d.-a)

Figure 37: The material of the addition is in dialogue with old church (Dow Jones Architects, n.d.-a)

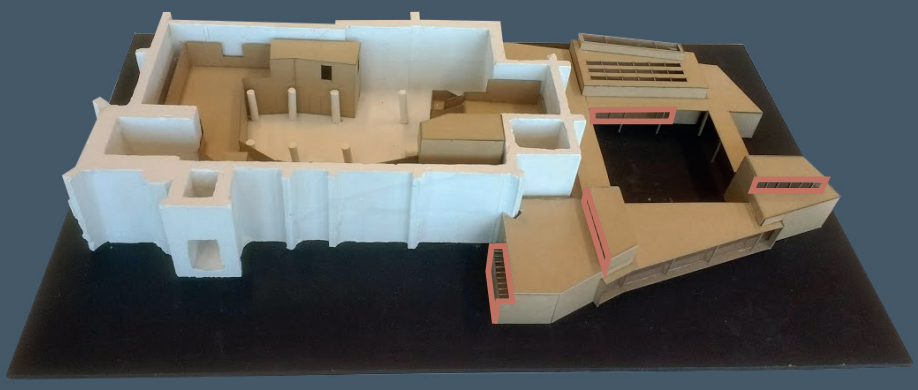

Figure 38: Rooflights are placed in a way that the sunlight entry suits the function of the space

Reacting with typology

"*A room in a house to have breakfast in probably wants to be in a different part of the house than a [room in a] house where you'll have dinner." (A. Jones, personal communication, July 31, 2018*)

A. Jones (personal communication, 2018) thinks, that nowadays typology is often confused with taxonomy. Jones states that typology is the relationship between form and use. Typology is about thinking in situations, in scenario's. It is not merely about form follows function, but about form follows situations. It is about what you do in the room, when you do it and what circumstances you would prefer in that particular situation.

The principle of designing in situations is notably used in the design of The Garden Museum. For example, the studyrooms and laboratorium are placed in the extension, with windows in the south facade. This means that during the day, the sunlight comes in, either through the windows or through the rooflights. Then, during the afternoon and early evening, when one is finishing the day in the cafe, there are both a window as well as rooflights facing the west, illuminating the cafe with the afternoon sun.

Figure 39: Natural light serves as a buffer between old and new (Grandorge, n.d.-b)

Reacting with natural light

"Natural light as a way of moving you around places" (A. Jones, personal communication, July 31, 2018)

Dow Jones Architects uses natural light as a way of moving you around places. For example, the passage from the extension to the church is marked by a pool of light. Furthermore, an important tombstone is illuminated by an ingeniously placed rooflight (A. Jones, personal communication, July 31, 2018). According to Young (2017): *"[The extra galleries at the front of the church are] directing your eye to the glimmer of garden light at the far corner."*

Jones (personal communication, July 31, 2018) explains that natural light is used as a buffer between old and new. Everywhere the new building touches the old building, a rooflight emphasizes this prominent contrast. For instance: *" Rooflights allow sunlight to wash the historic garden wall of Lambeth Palace"* (Young, 2017).

The use of natural light in Dow Jones' design for The Garden Museum is inspired by the architecture of the Baroque church where spaces are organized by means of natural light (A. Jones, personal communication, July 31, 2018).

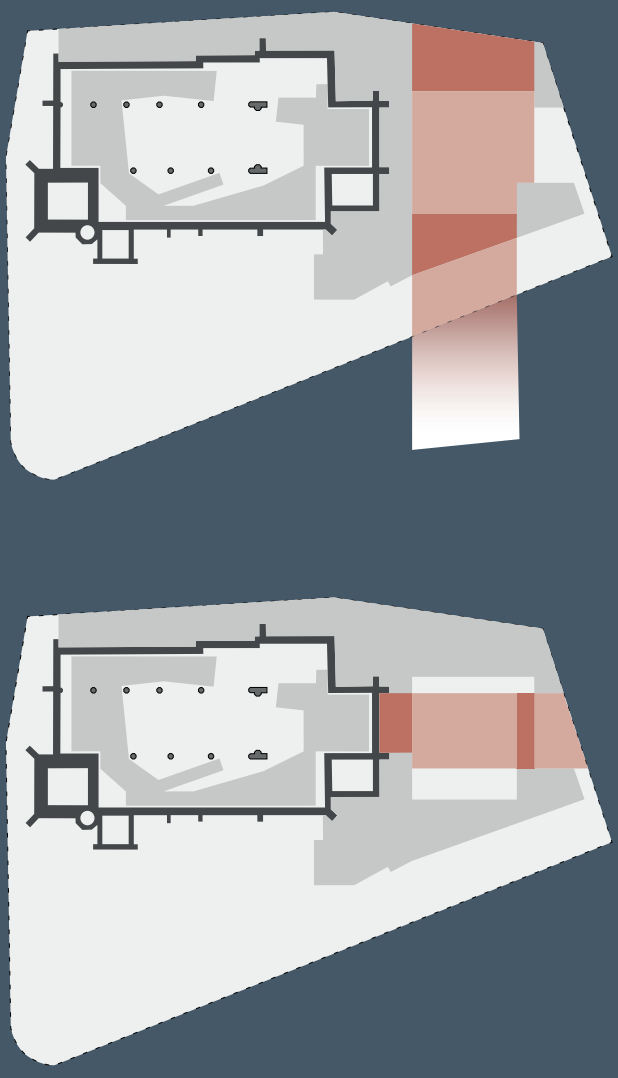

Figure 40: Layering by alternating spaces of architecture and nature

Reacting with layering

"As you move around, you get this ever changing perspective" (A. Jones, personal communication, July 31, 2018)

Layering is a fairly broad and undefined term. Dow Jones uses it in two different ways. First of all, as a way to tell a story, by changing views. English picturesque landscape design is the office's main source of inspiration for this phenomenon. By layering different types of spaces, with different angles, all kinds of different perspectives are created. The use of framing accentuates the views and contributes to the narration of the architectural story. (A. Jones, personal communication, July 31, 2018).

"There is a sense of theatricality throughout [the museum], just as there is in the best gardens, with the meticulously layered spaces revealing themselves as you move through and always leaving a tantalising glimpse of something intruiging to come." (Heathcote, 2017)

Another definition of the concept of layering is realised in the Phase II extension, where layering of architecture and nature is created by the differences in spaces and their transparant connections. For example when one visits the study room, the eye will be drawn towards the garden. A layered view of architecture, followed by nature, repeated by architecture and again nature, ending with the city, will reveal itself. And when one looks from the hallway along the east facade of the

church towards the garden, another architecture and nature sequence is presented (Figure 40). Again, this concept is emphasized by use of framing. Because of the way the three pavilions are situated, the specific layering sequences are framed and will be inevitable (A. Jones, personal communication, July 31, 2018).

"It [the museum] is layered vertically and horizontally, from the five archbishops found buried underneath to the reopened roof of the church tower, and from a noisy road through a quiet glazed cloister to the venerable boundary wall of its neighbour Lambeth Palace." (Moore, 2017)

Jones (personal communication, July 31, 2018) explains that the office was inspired by the Lousiana Museum of Modern Art by Bo & Wohlert where layering of architecture and nature also is a main topic. *"The museum [...] appears an integrated whole in which the interplay among architecture, the Park and nature create a special resonance for Louisiana visitors" (Louisiana Museum of Modern Art, n.d.)*

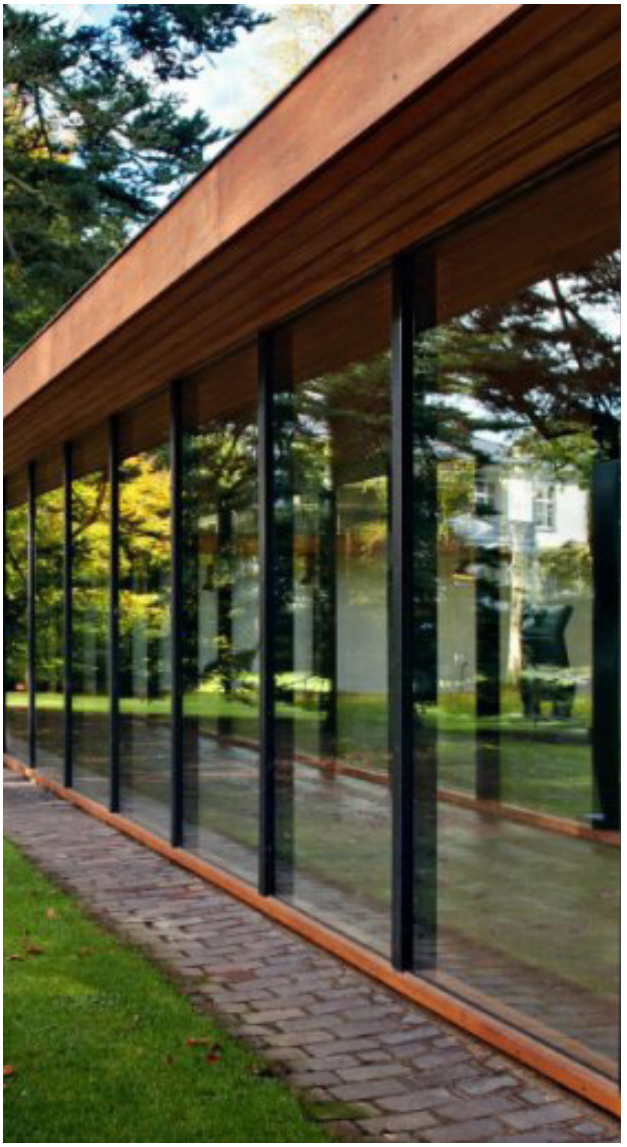

Figure 41: The layering theme is inspired by the Louisiana Museum of Modern Art (Louisiana Museum of Modern Art, n.d.)

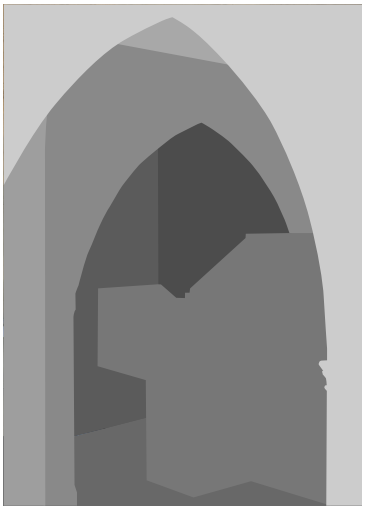

Figure 42: The original picture (Dow Jones Architects, n.d.-a)

Figure 43: Different elements that are layered in the space

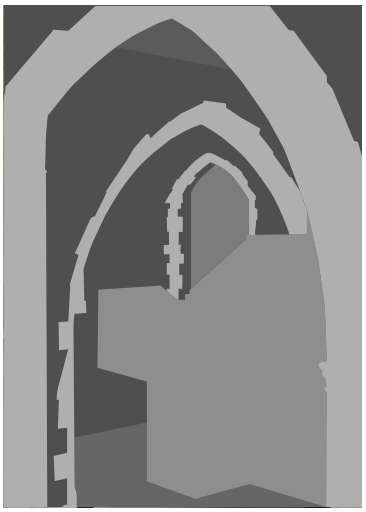

Figure 44: Most important shadows (amended from: Dow Jones Architects, n.d.-a)

Figure 45: Different materials in the space

Learning from model making

To recreate a picture

To look at details, that is what is needed in order to recreate a picture by model making. How is the light coming in? How is the space build? What materials are used? A picture related to the layering concept of The Garden Museum is chosen to recreate. In the picture, one looks through three different spaces towards the fourth, seperated by walls with arches. The staircase and the back window are very present objects, to which the attention is drawn.

In order to recreate this picture, an extensive analysis of the space, layered elements, light and materials was necessary. However, the first step was to determine the exact place the picture was taken from.

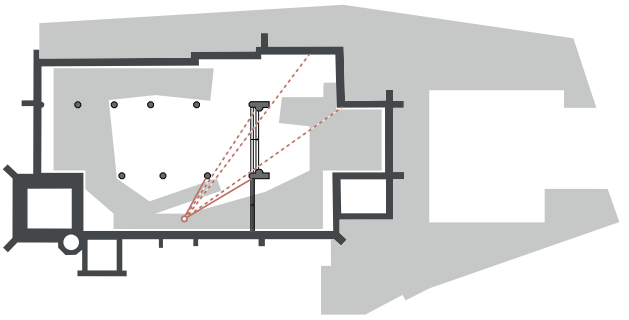

Figure 46: Place where the picture is taken

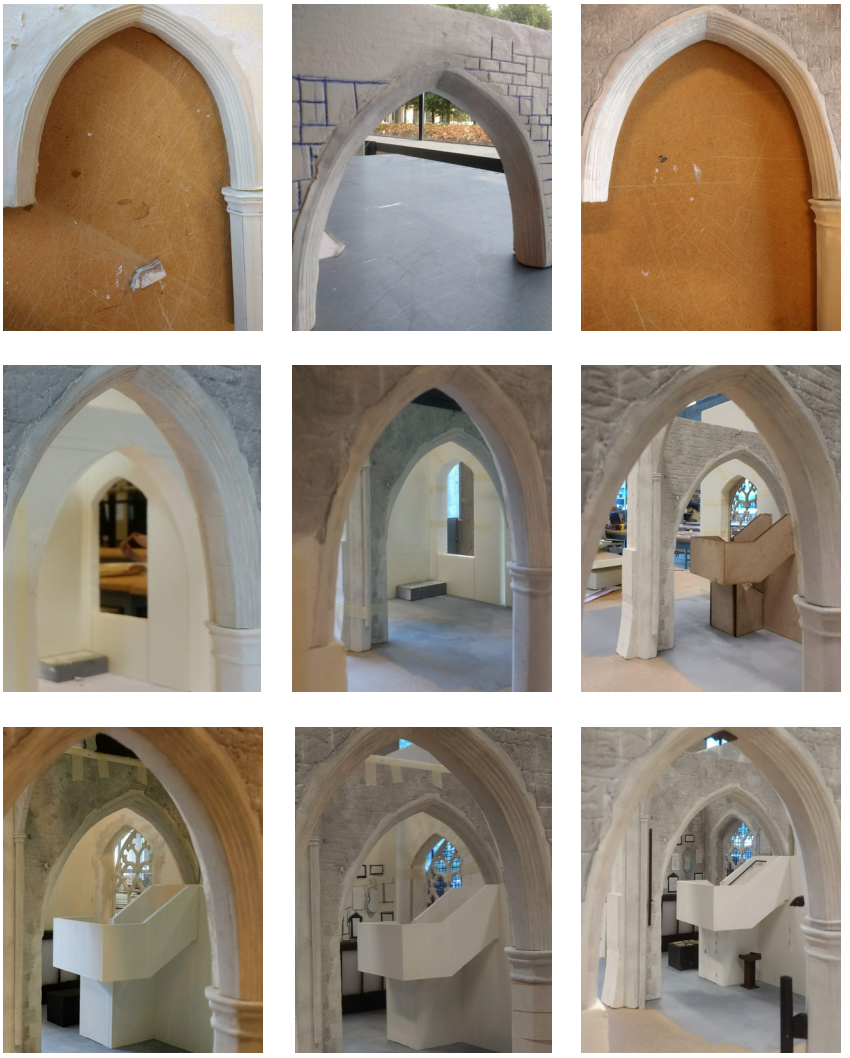

Figure 47: The process of model making

The process consisted of a lot of testing. Testing materials, testing angles and testing scale. Not all measurements were known, so some elements had to be remade several times to make them completely accurate. In order to keep track of the process and to make sure flaws and faults could be immediately tackeled, constant monitoring by picture-taking was applied (Figure 47).

The model for the recreation of the picture is mainly made out of foam. The detailling of the arches of the old church are made by coating the foam in clay and pushing a hand-made stamp with the right shape in it. The carved brickes are finished with paint en the limestone dressings are varnished. To make the window and the staircase, the lasercutter is used and they are polished with paint.

By making the model, it became clear to what extend the layered elements play a role to the view one gets. Even the slightest change in position of an element creates a completely different view. The recreation of the picture also emphasized the influences of spaces surrounding the visible area on the picture. Light travels in a very specific way, which can only be recreated by understanding what is happening in surrounding spaces. As it turns out: the invisible is just as important as the visible.

Figure 48: Original picture (Dow Jones Architects, n.d.-a)

Figure 49: Remake of picture

Reflection

to the lessons learned from Dow Jones Architects

Conclusion

of an in-depth analysis

Multiple lessons are learned from this analysis of the ingeniously designed building of Dow Jones. The Garden Museum has a lot to offer and its treasures start to unfold once you dive into it. While the building is immediately appealing, one will start loving it when exploring the thoughts and ideas behind it. Various of these learned lessons will be used as a source of inspiration in the next phase of this graduation project; the design of a building. The more specific lessons that will be used as guidelines during this next phase, has been brought back to six keypoints.

One of the first things Alun Jones mentioned in the interview was their interest for *context*. Finding the essence of a project, building or location and coming up with a response to that is key in that aspect. Besides that, the office often thinks in situations and relates form to use, meaning they think about *typology* when designing.

The Garden Museum is an exemplary project for the office's use of *layering* in a design. In The Garden Museum, different layers create a sequence of architectural and natural space. The *framing* of views emphasizes the changing perspectives the building has to offer when walking through it. One might think that the way the views are framed in The Garden

Figure 50: 6 main themes resulting from the analysis. Left to right, top to bottom: Buffer, material, framing, layering, context and typology.

Museum do not suffice the general understanding of 'framing'. Usually, views are framed in a way that the visitor's eye is forced in one direction only. The big transparant openings in de facade of the museum's extension, feel like they leave to much room for interpertation to be called 'framing'. However, The Garden Museum frames not by openings in a volume, but by the openings between the volumes.

By the choice of *material,* the architects of Dow Jones try to complement the church of St. Mary, but to not steal it's shine. The materials ensure that the addition and extension are a background to the church, but do not become invisble. There is a balance, which contributes strongly to the delicate feeling of the design. To emphasize this tenderness, a *buffer* of natural light is created everywhere the new extension touches the old church. Besides, on the inside of the church, the new construction never touches the old, leaving some air between the two elements.

Concluding, the six keypoints that will be used as incentives for the new design, will be context, typology, layering, framing, material and buffer (Figure 50). These main ideas will not be used in the exact same way as Dow Jones Architects does, but an own, critical interpretation of these points will be applied.

Reflection

An evaluation of learning from a building

The anlaysis of The Garden Museum was a meaningful and worthwhile research. Personally, I am really interested in transformation projects, and therefore was really curious about the design process of Dow Jones Architects for this project.

I have fallen in love with this building. It immediately spoke to me but I could not really grasp why. After studying it, reading about it and talking to Alun Jones about it, I started to understand the building and could more easily make sense of why I liked it, resulting in even more respect for this design. Everything that makes this building intruiging, is done on purpose. The way the addition does not touch the old church, making it feel so delicately put in. How the light shines on the old church forcing a visitors eye to the beautiful contrast between old and new. All the different perspectives of the building the architect is, purposely but very discretely, making one see.

Unfortunate is the fact that the architects did not seem to know much about why the original church was designed the way it was. This is probably due to the fact that there is not much information left about the original design of the church. Of course, the architects took all

the heritage into account with their design, and thought a lot about how to work with the limitations and the opportunities of the building. However, for example, the question of why the columns of the old church are not on a grid is still left unanswered. The reaction of Dow Jones Architects to the church of St. Mary is merely a reaction to what was visible at that time, instead of a reaction to the ideas of the architect of the church. I am curious about what it would have done with the design process and result if there was more knowledge about the original design.

At the start of the analysis, after reading multiple articles and interviews, I felt somehow overwhelmed by all the information. It was like I knew a lot about this design, I understood a lot of design decisions, but I could not organize all these ideas in a logical way. That is when I made the small models, and I started to see some sense in them. There were some clear ideas visible, arrangeable from exterior to interior. But only after I talked to Alun Jones myself, I could start to make the division between the primary ideas, and the secundary ideas.

The models I made still fit in the main keypoints, that came out of this analysis and therefore I feel that the steps I took, although they did not all immediately give me the final answer, did contribute to my understanding of the building. I learned that sometimes, taking a step back is necessary to be able to move forward.

What I also learned during this analysis, is the importance of talking to people. Not only talking to Alun, but also talking to tutors, fellow students, and even people that know nothing about architecture. It is helpful to make sense of things that you have been struggling with. Describing, brainstorming, discussing, it all serves to straighten your mind.

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Design of a building

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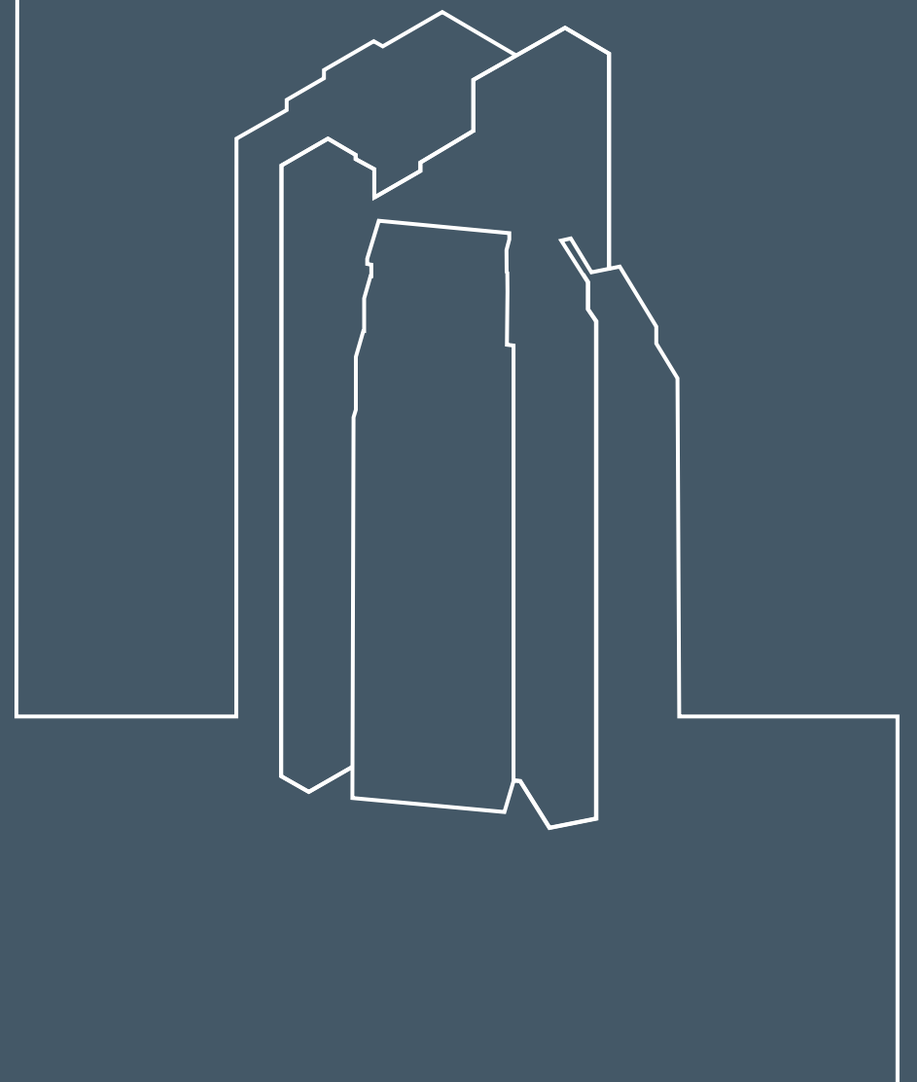

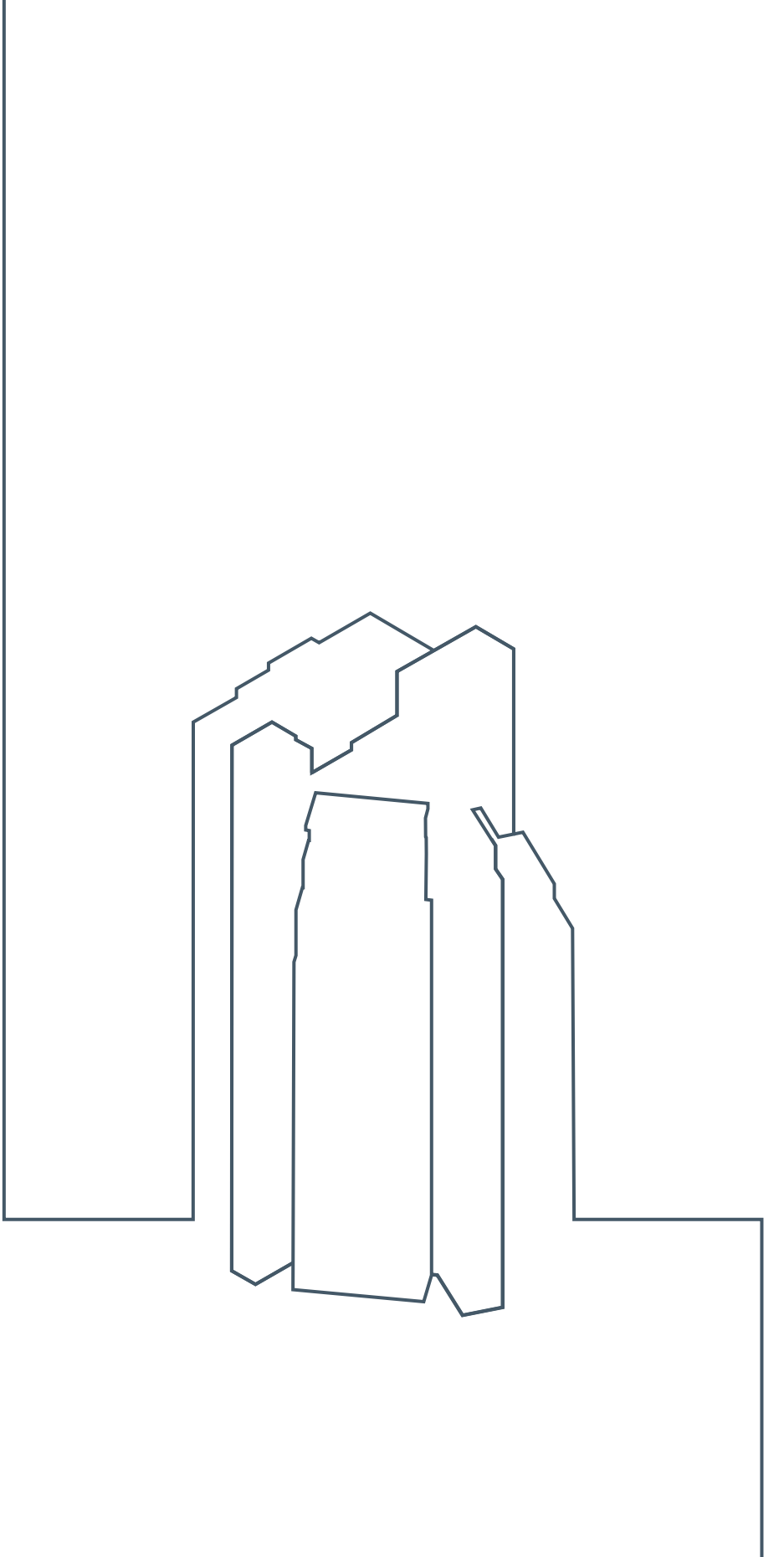

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Master program	Architectural Urban Design and Engineering
Graduation studio	Masterly Apprentice II
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Design of a building

Graduation Studio “Masterly Apprentice II”

Content

Introduction

to a Masterly Apprentice project

Evaluate, critique, design. Review that which is learned, critcally reshape those ideas and apply them to your design.

This is the second part of the two booklets that are the product of a 'Masterly Apprentice' project. In this part, a design proposal for the London Fire Brigade Headquarters is described. This design proposal is created with use of the lessons learned, as described in the first booklet. These lessons resulted in six keypoints, which have become the fundamentals of this deisgn proposal, namely: context, typology, layering, framing, material and buffer.

In this booklet the reader will find an urban design proposal for the former London Fire Brigade (LFB) Headquarters and a building design proposal for the Drill Tower on the LFB site. This is a proposal for a Ronald McDonald House, a home for the family members of the sick children staying at Evelina London Children's hospital. This family residence, named Braidwood Residence, will specifically be designed for families including brothers and sisters.

Braidwood Square

Redevelopment of the Lambeth Fire Brigade Headquarters

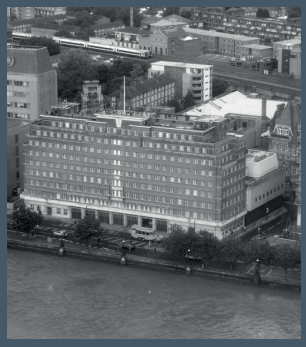


Figure 1: Top to bottom, left to right:
1. LFB Fire Station (London SE1 website team, 2018)
2. LFB Drill Tower ("Fire Brigade Headquarters, Albert Embankment, Lambeth, London", n.d.)
3. LFB River station (Georgie G, 2018)
4. LFB Workshop ("Fire Brigade Headquarters, Albert Embankment, Lambeth, London", n.d.)

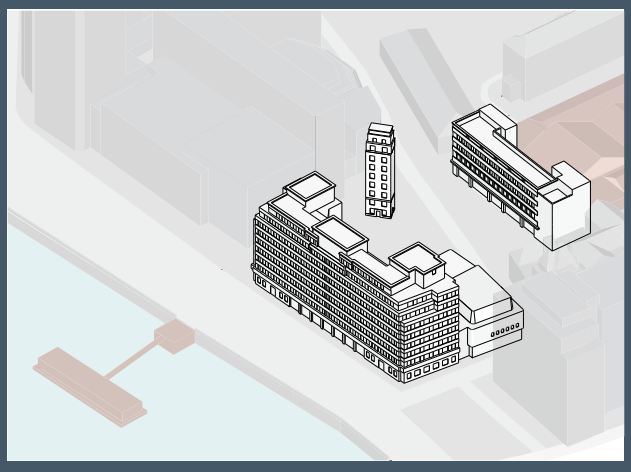


Figure 2: Complete situation of the former LFB Headquarters

An urban context

Of the Londen Fire Brigade Headquarters

The former London Fire Brigade (LFB) Headquarters consists of four parts: the LFB River Fire Station, the LFB Fire Station, the Drill Tower and the Workshop.

The Headquarters are build in 1937, by a design of E.P. Wheeler, who was assisted by G. Weald. The LFB Fire Station is aligned with the Thames. It holds, besides regular fire station functions, living quarters on upper floors. Originally, there was a rear wing, which was replaced by a 1980's extension. The Drill Tower is located at the rear of the LFB Fire Station. The Workshop across Lambeth High Street, hosted a training school, workshops and flats. Since January 2008, the complex has not been serving as the London Fire Brigade Headquarters anymore (Historic England, n.d.). Since 2002, the LFB Fire Station and the Drill Tower have been listed as a Grade II building, being: *"Of special architectural interest as a well-composed and externally unaltered 1930s building which, while in the streamlined Moderne idiom, upholds the Arts and Crafts ideal of collaboration between architecture and sculpture"* (Historic England, n.d.).

For the urban design proposal, the focus is on the LFB Fire Station with extension, the Drill Tower and the front part of the Workshop.

Figure 3: Evelina London Children's Hospital in the north, The Garden Museum in the middle and The Lambeth Fire Brigade Headquarters in the south.

The London Fire Brigade Headquarters

and its possibilities for hosting a family residence

The Evelina London Children's Hospital is located at St. Thomas' Hospital at Westminster Bridge Road, Lambeth, London. They offer a wide range of services for patients from before birth, into adult life (Evelina London, n.d.). This means, a lot of different types of patients and families are visiting the Evelina London Children's Hospital.

When one walks from the site of the hospital alongside the Thames to the south on Lambeth Palace Road, The Garden Museum is visible at the left. A little further down the road, on Albert Embankment, the London Fire Brigade (LFB) Headquarters turns up on the left side. The fact that The Garden Museum has a connecting role in the route from the hospital towards the LFB Headquarters makes this a perfect location for the design proposal. When looking from the road along the Thames to the left, right before the LFB Fire Station, one sees the drill tower of the complex in its fullest glory.

For this design proposal, the drill tower will be hosting the Braidwood Residence. Parents, brothers and sisters, will leave their beloved family

Figure 4: The LFB drilltower, rising between two big buildings ("Fire Brigade Headquarters, Albert Embankment, Lambeth, London", n.d.)

member behind in the hospital every day. Since this is a miserable experience, the route home should be as pleasant as possible. The chosen location for this family residence will contribute to this, explained by the following description of a family walking home after a day in the hopsital:

When the family leaves the hopsital, they feel miserable. Yet another day of leaving their child, brother or sister behind. They are tired, insecure, scared. The walk alongside the river Thames helps to clear their minds. The cool breeze coming from the water washes away the hospital smells and makes them think more clear again. They make a stop at The Garden Museum for a cup of coffee in the peaceful museum's garden, because they don't feel like going home yet. The museum is about to close and therefore it is quiet. The afternoon sun shines upon them in the cafe. When they continue their walk it is already dusk outside and the lanterns illuminate the river beautifully. After a few minutes, they see the huge Fire Station arise and they know they are almost home. Soon after, they look at the left and find their temporary home waiting for them. The view of the tower being cosily embraced by two big buildings, makes them feel safe and at home.

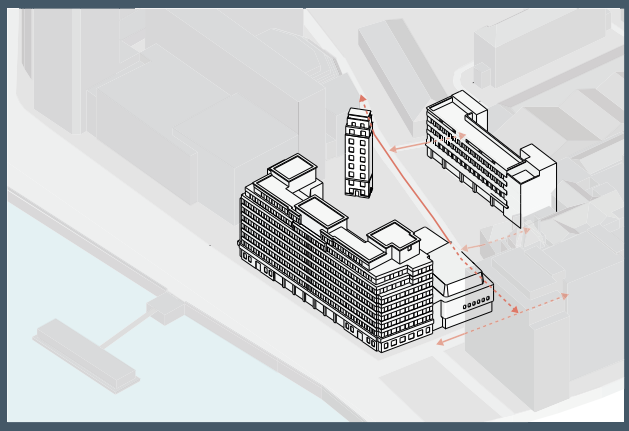


Figure 5: Current infrastructure surrouding the LFB Headquarters

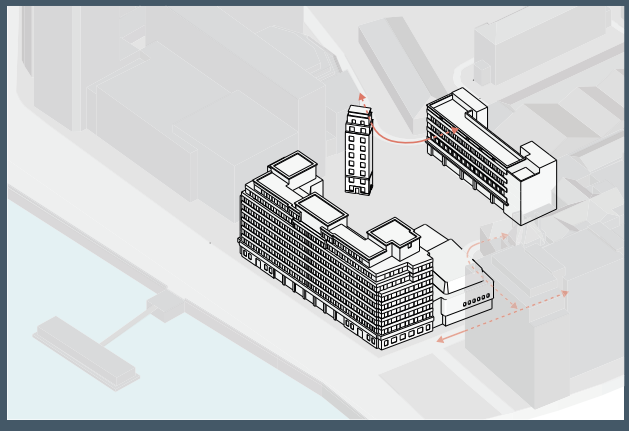


Figure 6: New design for the infrastructure surrouding the LFB Headquarters

Reacting to the urban context

Creating Braidwood Square

The concept of creating a square started at noticing the interesting composition of the buildings of the former LFB Headquarters. Lambeth High Street is currently running straight through the complex, brutally seperating the old Workshop from the rest of the Headquarters (Figure 5).

The placement of the buildings itself, asks for something completely different. The Fire Station, Drill Tower and Workshop form an amazing ensemble that embraces the space between the buildings. The volumes of the buildings all vary in scale, which creates a dynamic interplay of masses. The space embraced by the buildings can be optimally used as a square. By creating a plaza, the composition of the buildings will be strengthened and the beauty of these buildings will be exposed.

In order to make this square, the road is cut off (Figure 6). Motorized traffic will still be able to reach their destination, because there are more than enough alternative roads. Thus, this intervention has very little consequences for the traffic in the surroundings of the plot and simultanously offers a new public space in the densely built London.

A square is created (Figure 7). The majority of the people will be passing the square by walking alongside the Thames. It is thus very unfortunate that the square is hidden by the Fire Station of the LFB Headquarters. At this point, the square will be only visible from Albert Embankment when one looks towards the drill tower between the Fire Station and their neighboors, the International Maritime Organization building. Even though this is a very, later to be discussed, interesting view, it does not give any clues of a square being behind the Fire Station.

By opening up the old Fire Station doors, a passage is created from Albert Embankment directly to the square (Figure 8). By the removal of the 1st floor in the created passage, a spacious semi-public space will be created. This two-storey high passage offers a great opportunity to host a comfortable place to stay and shop. Besides, it offers a teaser view from Albert Embankment to the square.

The entrance to the square between the buildings of the Fire Station and the International Maritime Organization, is still of great use, since it offers the perfect cut-off for the guests of the family residence who do not want to mingle with the visitors of the square.

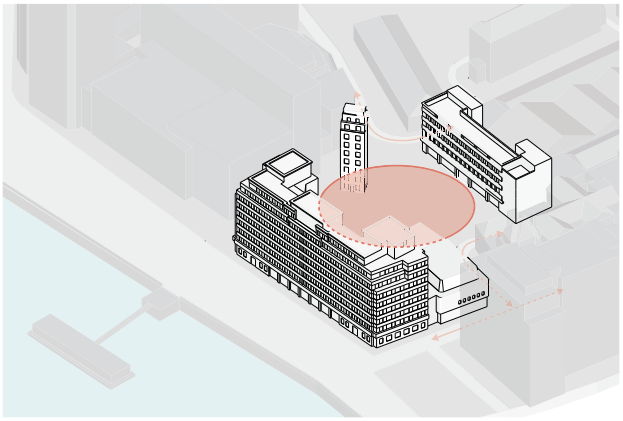


Figure 7: Creating a square situation

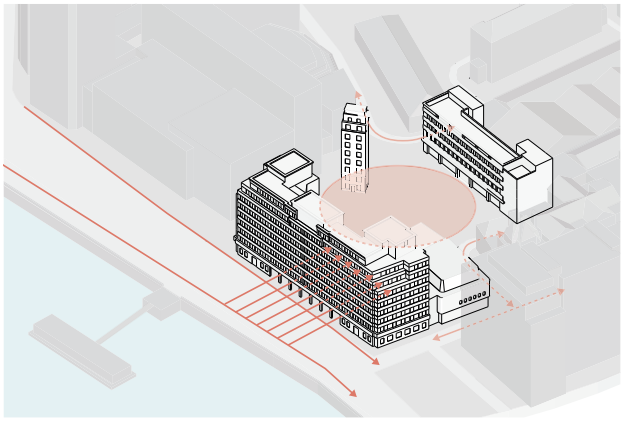


Figure 8: Opening up the LFB Headquarters

Figure 9: Old functions in the surroundings of the LFB complex

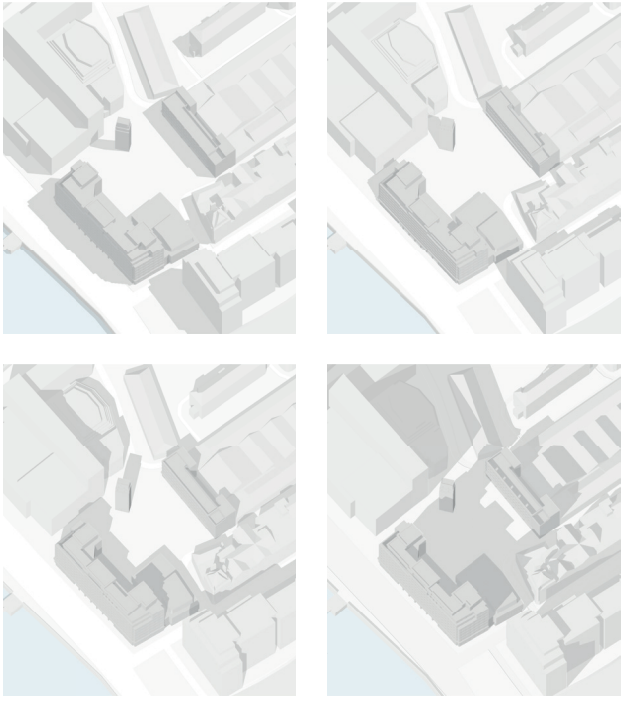


Figure 10: Solar study on June 21st. Top to bottom, left to right:

1. 11:00h
2. 13:00h
3. 15:00h
4. 17:00h

Reacting with typology

to create a vibrant square

The new urban concept involves new functions in the buildings of the complex. Along the two-story high passage, created in the LFB Fire Station, retail will offer visitors a nice opportunity to sit down, shop and enjoy the beauty of the new square.

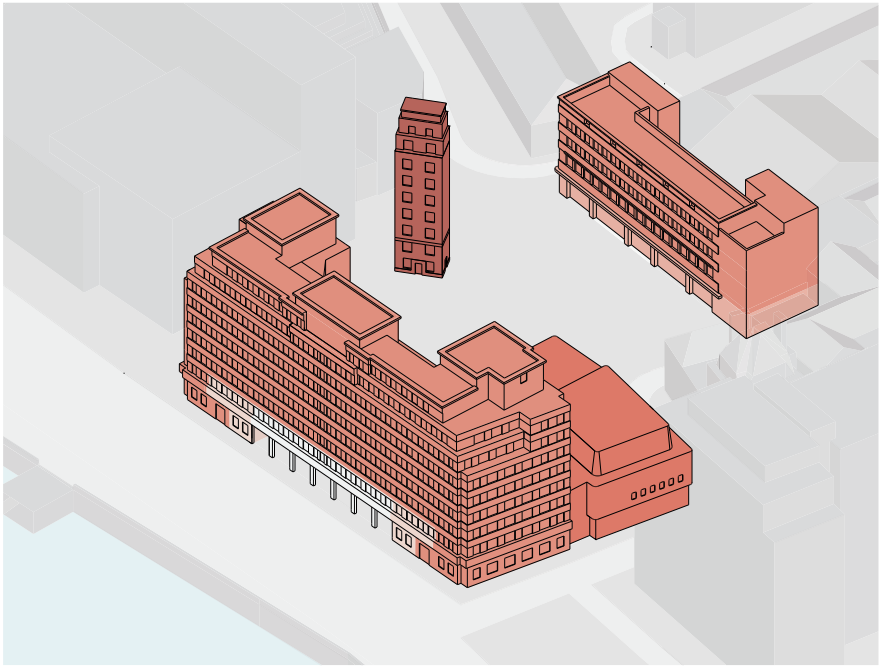
Once the visitors are in the passage, they will have a better view of what is happening on the square. At the end of the square, they will see the Workshop. According to the sun study on the 21st of June, shown in Figure 10, the building is lit in sunlight until the late afternoon. This means that the Workshop is the place people will be drawn to, where they would like to hang out and have a drink in the sun, made available by the bars and restaurants which will be situated in this building. This is a great addition, since the surroundings offer only one pub at the moment (Figure 9).

The upper floors of the Fire Station and the Workshop will be used to accomodate loft apartments. This involves the largest amount of square meters, and means the upper part of the buildings will create a living quartier, with leisure functions on the ground floor. The goal is to make this square, with use of these functions, a vibrant square with a relaxed

vibe, where you would like to spend a part of your day.

To complement this idea of a square where you can hang out and enjoy your day, another leisure function is added. The 1980's extension is a building with very little windows and is always in the shadow of other buildings. The shape, appearance and situation of the building make it a less attractive location for a lot of functions, but offer the best circumstances for a cinema. People can now visit the square also on a rainy day, or spent their morning watching a movie and end with a drink in the afternoon sun.

Lastly, the Drill Tower will be used to create a family residence. One might wonder if this would be the best location for a family residence, but the answer is simple. People in the situation to be in need of a family residence, are the ones that do not have a lot of time or energy for leisure. Yet, it is so important for those people to be distracted sometimes and most of all, not be isolated from the rest of the world. Therefore, it is thus a great opportunity to give these people a place where they can relax and have privacy, calm and ease, but where the step to go out, have fun and not think of the misery for a while is very small.



	Retail	712 m²
	Restaurants & Bars	586 m²
	Housing	9697 m²
	Cinema	1134 m²
	Residence	276 m² + ...

Figure 11: New functions in the LFB complex

The design for the square is inspired by the Jubilee Gardens, a design by West 8. They have used organic shaped elements to create a playful landscape. The space between the elements is used as pedestrian area, meandering between these park-like pieces filled with grass, trees and flowerbeds (West 8, n.d.). Besides, these miniature-park-elements have integrated benches on the side, and are used as a park should be used. People are playing ball games, laying in the sun and enjoying a picnic.

In order to place such organic shaped elements on the square of the former LBF Headquarters, the paths people will follow most likely are analysed (Figure 13). These paths are the guidelines for the placement and the shape of the elements (Figure 14). Besides maneuvering the pedestrians through the square, the shapes are also offering green, benches and a playground. One area is marked with different pavement to highlight the outdoor space for the bars and restaurants in the old workshop (Figure 15).

Figure 12: The Jubilee Gardens (West 8, n.d.)

Figure 13: The paths visitors of the square will most likely follow

Figure 14: Multifunctional elements are placed between these paths

Figure 15: The final design of the square

Figure 16: James Braidwood, 1800-1861 (Paul Hashagen Collection, n.d.)

Reacting to the historical context

of the LFB Headquarters

The square of the former London Fire Brigade Headquarters carries a name that reflects the historical footprint of the complex.

James Braidwood lived from 1800 till 1861. Braidwood was the son of a builder and learned a lot about building construction during the time he was working for his father's company. This knowledge was of great value, when he became chief of the Edinburgh fire engines at only 23 years old. Braidwood became an admired man, by his enormous courage, amazing leadership, thorough training of man and great inventions in fire-escaping. In 1833 the London Fire Brigade was founded, and was supervised by James Braidwood. He set a great example for his men, who were outstanding in their dedication and bravery. In 1861, on the 22nd of June, Braidwood fought his last fire, the great fire at Cotton's Wharf, and a hero was taken (Braidwood, 1866).

In honour of his services, the square at the former LFB Headquarters will be named 'Braidwood Square'.

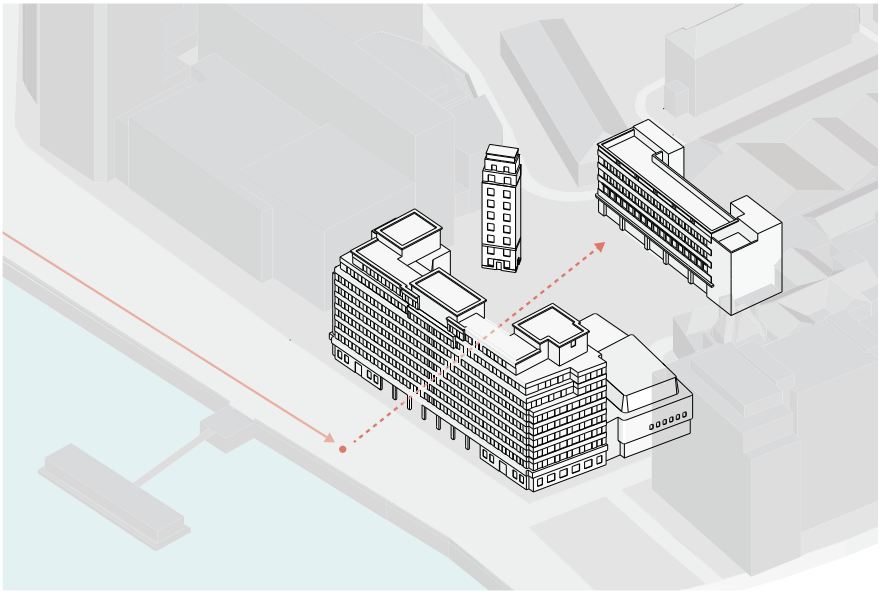


Figure 17: The layering concept explained. One walks down Albert Embankment and stops in front of LBF the Fire Station.

Reacting with layering

by use of sequential spaces

The proposed urban concept uses layering as its main theme. A nice example of this, is when one walks down Albert Embankment and stops in front of the Headquarters. Looking to the left will offer a diversity of spaces to look through (Figure 17).

First of all, there is this busy, public road where a variety of traffic will pass one's view. In this case, the traffic is used as an opportunity to contribute to the layering concept instead of seeing it as a disturbance of the view. Secondly, the sightline crosses the Headquarters. In here, there will be different people doing different activities. Some will shop, some will sit and chat. Some will pass through to enjoy the square and some will just use the passage as a shortcut. All these people will also be part of the space-layering experience. This two-storey high passage offers, next to this particular sightline, a great amount of layered views because of the facades one looks through. This results in an alternating inside-outside sequence for almost any sightline through the Headquarters Passage.

After this semi-public passage, one will have a view over the square. In summertime this square, lit by sunlight, might be more crowded than the passage. During wintertime, the square will be more empty, most people

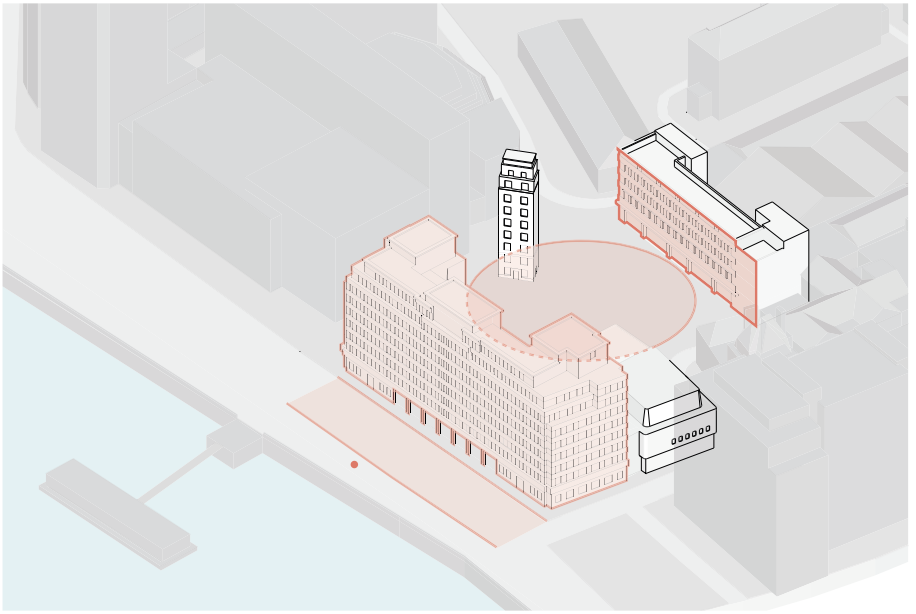


Figure 18: A sequence of spaces is visible from Albert Embankment, starting with the road, followed by the passage in the Fire Station and the square and ending at the Workshop.

will cross, rather than stay on the square. Finally, the sightline ends at the semi-public Workshop. Another historic building brought back to life, by giving it a new function and having it being part of a bigger whole.

The eventual sequence one experiences when looking to the left while walking on Albert Embankment, is traffic, Headquarters Passage, Braidwood Square and the Workshop (Figure 18). Sightlines like this are the perfect way to get peoples attention and get them to discover the charm of Braidwood Square.

The Braidwood Residence

A home for family members of sick children at St. Thomas' hospital

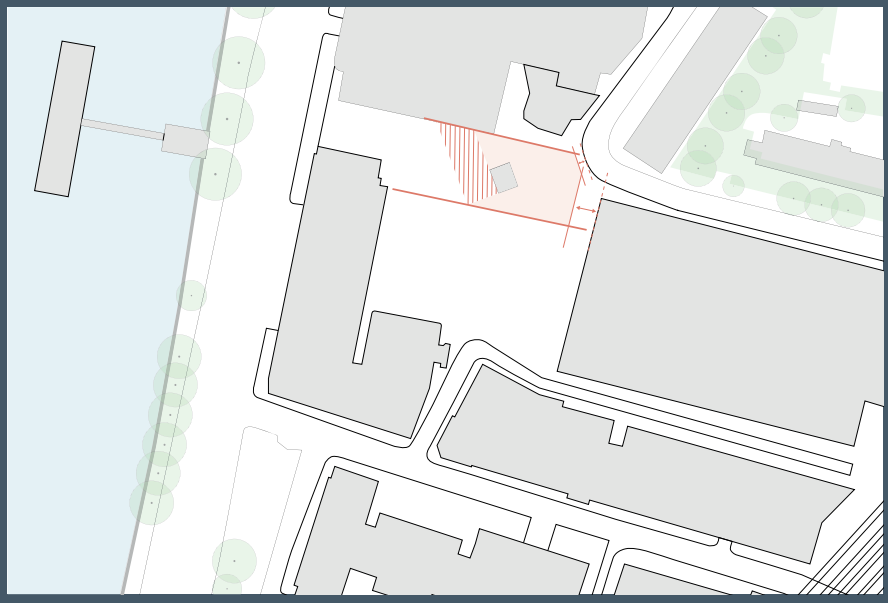


Figure 19: The plot of the Braidwood residence is determined by the buildable area surrounding the former drill tower.

Reacting to the context

of the Drill Tower

The Drill Tower is a ten-storey high building, with a very small footprint of assumingly 7 meters by 4.5 meters. It is made out of a concrete structure with brick cladding.

The plot of Braidwood Residence, a home for family members of the sick children staying at Evelina's London, is shaped by the buildable area surrounding the Drill Tower. The front of the tower, the southwest facade, is the most important part of the tower. The sightline from Albert Embankment through the passage north of the LFB Fire Station is the a very important view because the Drill Tower rises between two big buildings. This means that the area in front of the southwest facade of the tower must remain unbuild.

The view from the Fire Station towards the Workshop is important to keep clear because of the square and its space layering experience. Furthermore, enough distance should be kept from the residence to the Workshop, the road behind the Drill Tower and the pub on the northside of the tower. All these 'rules' determine the plot that is available for the residence to be build on (Figure 19).

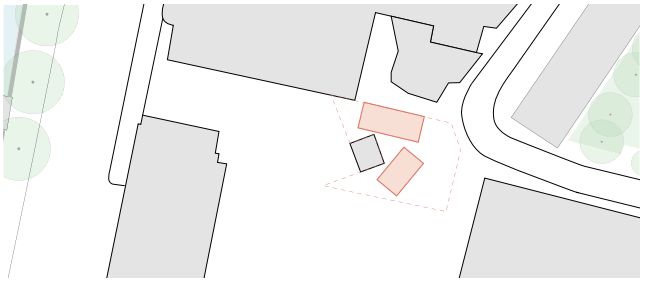


Figure 20: Two volumes are added

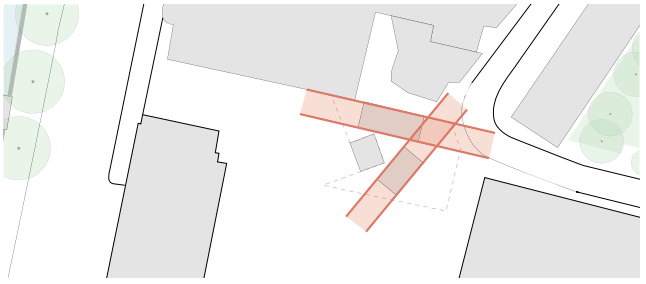


Figure 21: The volumes are aligned with the surrounding roads and buildings

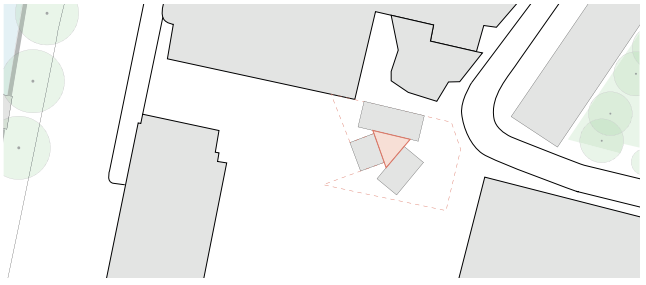


Figure 22: The volumes create a triangular negative space

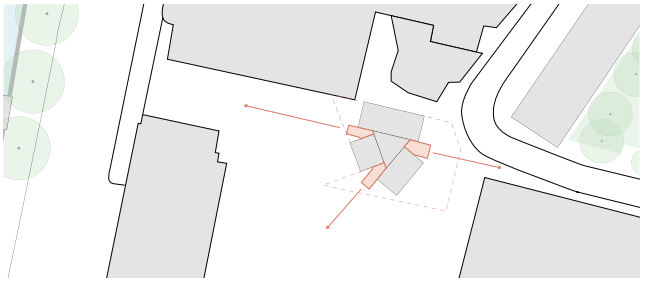


Figure 23: The gaps between the volumes are filled with vertical transportation spaces.

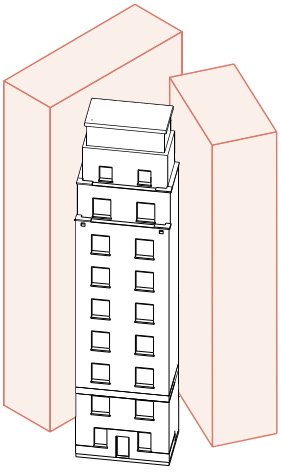
Within the borders of the plot surrounding the Drill Tower, which will also be part of the residence, two volumes are added. These rectangular shaped volumes are around the same scale as the existing tower, slightly varying in measurements (Figure 20).

The two volumes are aligned with the road and the neighbooring building (Figure 21). In this way, people will most oftenly see the volumes from their smallest side. This emphasizes the elegancy and slenderness the old tower already introduces to the plot. Besides, by creating a diverging shape towards Braidwood Square with use of the bottom volume and the Workshop building, people will be guided towards this plaza.

The negative space created by the three volumes serves as transportation area between the masses. This space offers the perfect opportunity to create atria and play with light and visual connections (Figure 22). The triangular shaped area will work as a buffer between communal and private spaces. This particular function as a buffer is accentuated by the contrast between its triangular shape and the rectangular shaped volumes, and its difference in materialisation.

The established ensemble has a certain tension to it. This is the result of the careful placement of the two volumes next to the old tower. Because of the angled placing of the rectangles, purposely too close to one other, an interplay between the three shapes commences.

The small openings between the volumes are used to offer entrance to the vertical transportation areas, placed between the sides of the volumes. The staircases and elevator are designed in a way that they offer the best views from the building towards the Thames, the railway, and Braidwood Square (Figure 23).



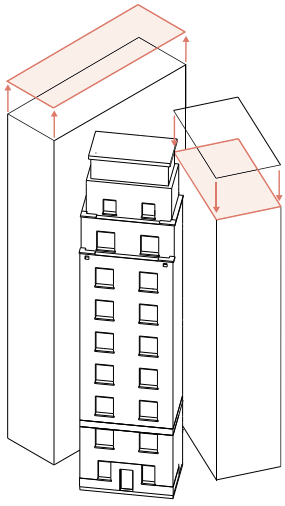
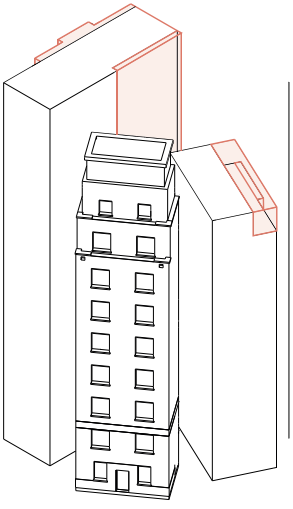


Figure 24: The volumes have the same scale as the existing tower

Figure 25: The volumes are varying in height to create a small city skyline



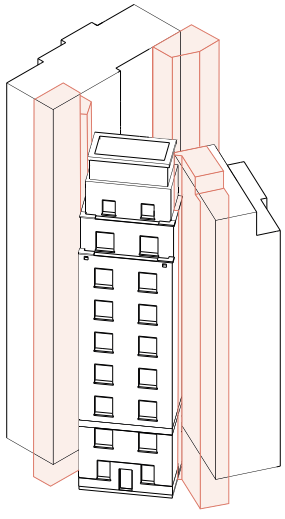


Figure 26: To emphasize the look of minitiature skyscrapers, the shapes are altered with small edges and setbacks.

Figure 27: The vertical transportation spaces contribute to the elegancy of the tower by their slenderness.

The existing tower has the appearance of a skyscaper, but not the scale. For that reason, the tower feels like a miniature skyscraper. This concept is emphasized by the addition of two similar scale volumes (Figure 24). Because of the tension in this ensemble, the scale of the towers and the interplay between the volumes, a mini-Manhatten has started to appear. This architectural concept will be a great addition to the already densely built London, by being a small city inside the city.

In order to strengthen this concept, the height of the towers are adjusted and it has begun to look like a small city skyline (Figure 25). One of the volumes is higher than the existing tower, and one of them is lower. This is done to keep the balance, to make sure the Drill Tower is not overruled by two tall highrises. On the other hand, two lower buildings would take away the skyscraper effect.

To support this idea of a scaled down city landscape, details have been added to the volumes (Figure 26). By doing this, the scale of the added volumes grow towards the scale of the drill tower, and they start to look like miniature skyscrapers as well. Furthermore, the cascading of the volumes contributes to the skyline effect of the ensemble.

As a result of the small space between the volumes, the volumes are still separated from one another. In the interest of preserving the mini-Manhattan concept, it is important that the volumes stay seemingly separate. When placing the vertical transportation spaces, this is managed by making these volumes differ in height and shape (Figure 27). Besides, all volumes only touch on the inside of the ensemble, resulting in a dynamic and playful outline of the whole. Later on in the proces, the independence of the masses is also strengthened by materialisation.

To understand more about the needs of people staying in the Braidwood Residence, a visit was payed to the Ronald Mc Donald House Veldhoven, The Netherlands. After a tour through the house, and a talk to the manager and volunteers, some interesting insights were gained.

For the managers and volunteers it is very important to have a clear overview over the guests entering and leaving. Besides, it is desirable that they can already see the guests who are about to enter, in order to determine in what state of mind they are and in what way they should be received. For the staff, it is also important that the design of the house is functional, for example, that it is easy to clean.

For the guests, it is important that they have enough privacy, but that the step to talk to other families staying in the house is very small. Sometimes, people even need to be forced into situations to get in contact with people in the same situation, because they would not do that naturally. It turns out to be very helpful for processing the circumstances though.

Last but not least, the residence should be a home for its guests. And that home, should be everything but a reminder of the hospital. It is a place to be away from the hospital and get some rest. A place where you can be yourself, where you can think of something else than your sick child, brother or sister, even if it's just for a second (Manager and volunteers Ronald Mc Donald House Veldhoven, personal communication, 2018).

Remarkable is that the points about praticality and the ones about being a home are complementing each other, while the contact and privacy matters are very contradicting (Figure 28). This means that a close eye should be kept on these aspects to find the perfect balance.

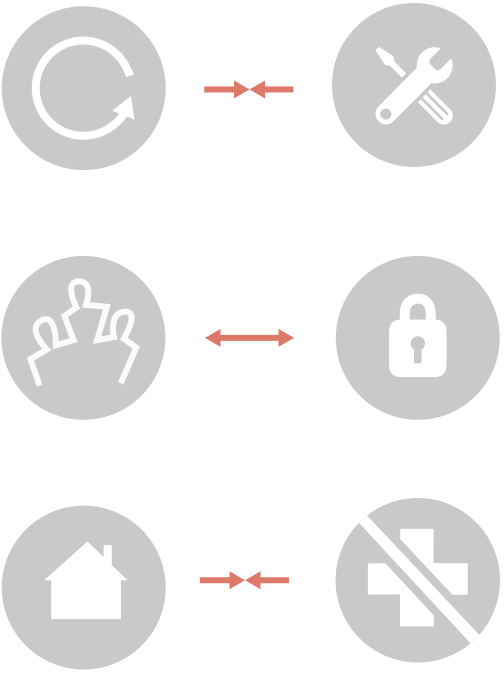


Figure 28: Points of attention for the design of a Ronald McDonald House. Top to bottom, left to right:
1. Overview for the staff
2. Practicality
3. Contact with fellow families
4. Privacy
5. Being a home
6. Being a place away from the hospital.

The requirements of the residence are divided in three types of space, namely: private, communal and staff. All functions can be placed in one of those groups, and have their own conditions (Figure 29).

The Braidwood Residence will not only be a house for families of very young children, but also for bigger families and for families with teenagers. Therefore, the suites are a little bigger then just a two person bedroom with sleeping couch, which is the case in the Ronald McDonald House Veldhoven. Besides, the suites will have a small seating area. In that way, families will have a place where they can sit together in private.

The house will have a shared kitchen and shared dining, to make sure people won't get isolated. With use of visual connections and smaller seatings within a bigger space, the balance between privacy and contact with others will be guarantueed.

A sports facility will be situated in the Braidwood Residence, to offer the people a place where they can release their energy. A youth base will provide a place to hang out and meet up with each other for the teenagers. Work and study places will be added to make it possible for the guests to continue their necessary tasks and jobs.

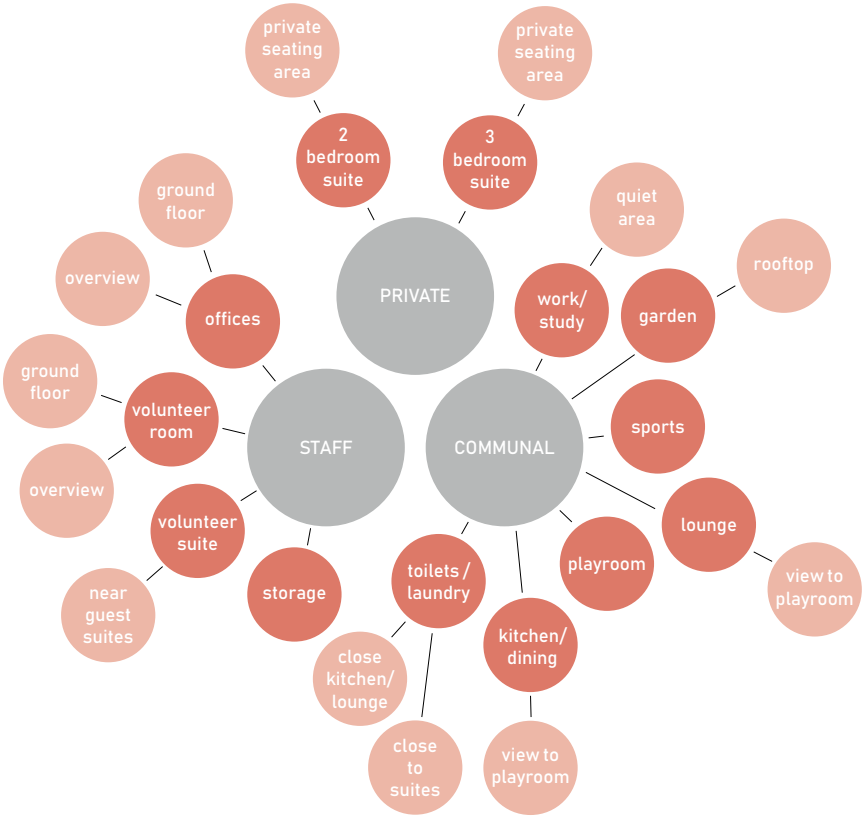


Figure 29: Overview of the requirements for the Braidwood Residence

Figure 30: Brick of the former drill tower. (Amended from: Kennington Runoff, 2017)

Figure 31: CLT (Binderholz, n.d.)

Figure 32: Boral Coloured Concrete - Coconut (Boral, n.d.)

Reacting with materials

to complement the Drill Tower

The existing tower has a brown coloured, brick cladding. The new volumes are made out of sand coloured concrete to complement this brickwork facade, but to not overrule it. The rough, heavy concrete is contrasting the fine, detailed brickwork. To balance this, the concrete's sand colour makes the material adjust towards the warm colour of the bricks. The color spectrum is concluded by the light coloured wood of the transportation zone. The warm appearance of this material is contrasting the cold concrete. The combination of these three materials makes sure the tenderness and modesty of the addition is guaranteed.

While every material has a contrasting aspect with another, they also have similarities. This makes the materials work together. They are too different to all blend together, but they do not conflict either. They communicate with each other in a way that makes the existing tower still stand out, but let's the added parts of the building stand their ground in the ensemble as well.

The window frames of the concrete towers are made of steel. This is done in order to create a picture frame effect of the window on the wall. To emphasize this, the window frames are put flat to the face of the interior

wall, leaving no edges surrounding the frame. On the outside, this means that the window frames lie very deep in the facade (Figure 33). By doing so, the new towers refer to the old Drill tower that does not have any window frames at the moment and the facade openings are just very deep holes. This effect is also kept for the Drill Tower by placing the windows on the inside of the tower.

Steel frames are also used for the windows between the old tower and the new tower, where natural light creates a buffer. This effect of a buffer is supported by the contrast between the dark, cold steel and the light coloured wood and warm coloured bricks. In this way, the materials that are complementing each other will still keep their indepence.

The indepence of the volumes is necessary to preserve the mini-Manhattan look of the design. By making the transportation zone out of wood, the zone seperates the three volumes (Figure 34; Figure 35) This seperation is emphasized by also making the window frames of this zone out of wood. In this way, the whole space is materialised differently than the three volumes, creating a certain distance that the space needs in order to serve as a buffer.

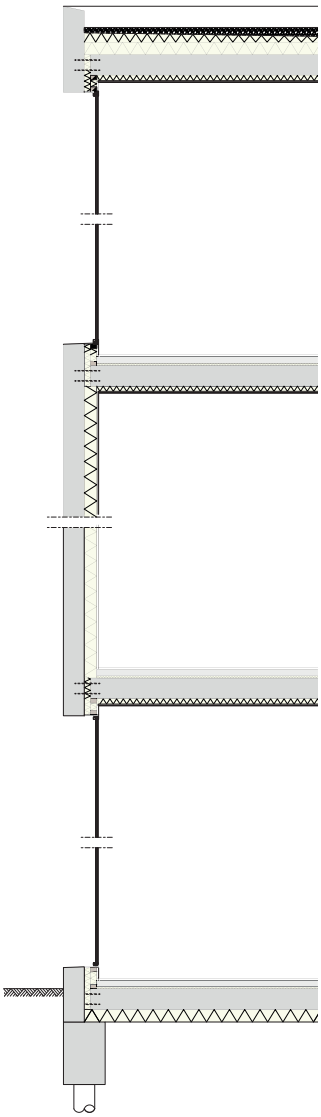
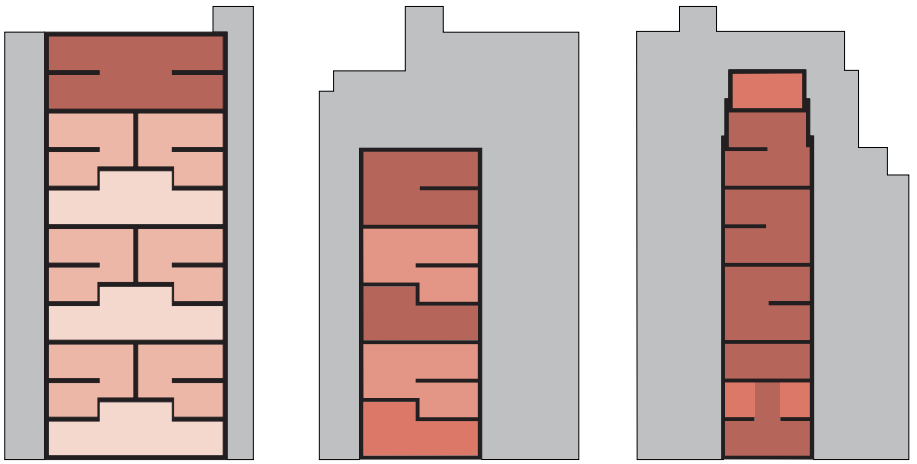


Figure 33: Section, scaled to fit

Figure 34: Elevations. Left to right: southeast elevation, southwest elevation and north elevation

Figure 35: Thanks to the materialisation, the transportation zone serves as a buffer



Type A apartment

Type B apartment

Type C apartment

Staff functions

Communal functions

Figure 36: Section with functions

Reacting with a buffer

in function, material and light

To create a smooth transition between the public square and the private Braidwood Residence, a buffer between the two types of spaces is needed. The existing tower serves as this transition zone, since it is located at the edge of the square and the other volumes are situated more or less behind the tower. By placing only communal and staff functions in the Drill Tower, a buffer in between private functions and public functions is created. All private functions are situated in the added volumes, so they have a little more distance to the vibrant square. By doing so, more comfort is offered to the guests of the Braidwood Residence, as the private functions will be as private as possible and different gradations of public activity are offered.

Another kind of buffer is created by the use of light. The contrast of old and new is accentuated by lighting up the existing tower where it touches the addition. During day time, this is visible in the interior of the building, when the daylight hits the bricks of the tower, creating a play of light and shadow. At night, the artificial light in the building, accentuates the transition between old and new on the outside. The existing tower is framed by light, highlighting its existence (Figure 37). This buffer also contributes to the indepence of the volumes, as discussed before.

Figure 37: Light as a buffer between old and new

As told before, the wooden transportation zone also acts as a buffer. It seperates the existing tower from the added volumes, by its shape, volume, materialisation and function.

By using the wood in the interior as paneling, as well as flooring and ceiling material, every floor feels almost like a bowl placed in between the volumes, guiding its users from one volume towards the other (Figure 38). Its appearance emphasizes the delicacy with which this space is inserted within volumes. As a result of the paneling, it seems like the new addition is not attached onto the existing tower. For the eye, it is respectfully and tenderly wrapping it.

Because of the difference in material, the transportation zone expresses its difference in function relative to the other volumes. This means that every time one leaves a suite or communal space, one goes through this transition zone before entering another space. In that way, this zone serves as a buffer between functions (Figure 39).

Figure 38: The paneling of the wood makes it look like the addition is placed in between the volumes like a bowl

Figure 39: Emphasized by its materialisation, the transportation zone acts as a buffer

Figure 40: The staircases are designed in order to frame views.

Reacting with framing

to show the hidden views of Lambeth

As mentioned before, the volumes for vertical transportation are designed in a way that they are framing the best views towards the surroudings. This is realised by thoughtfully placing the window openings according to the direction one uses the stairs in. The whole space for the staircases, including the stairs themselves, are materialised in wood, meaning that the focus of the space is on the framed view. The elevator is designed with use of the same concept. The whole space is materialised in wood, and window openings are framing the views. By alternating the closed and open parts of the facade, everytime the elevator and the stairs pass a window, new attention is drawn to the view it frames.

The stairs offer a vibrant view towards Braidwood Square, a cosy view to the old Workshop building and quiet vistas over the railway and along Lambeth High Street. The elevator offers a peaceful view towards the Thames. The result of these different views, is that the guests of the residence also have a choice in what the would like to look at, according to their state of mind.

By use of windows along the sides of the Drill Tower, the tower is framed by day with sunlight on the inside, and by night with artificial light on the outisde.

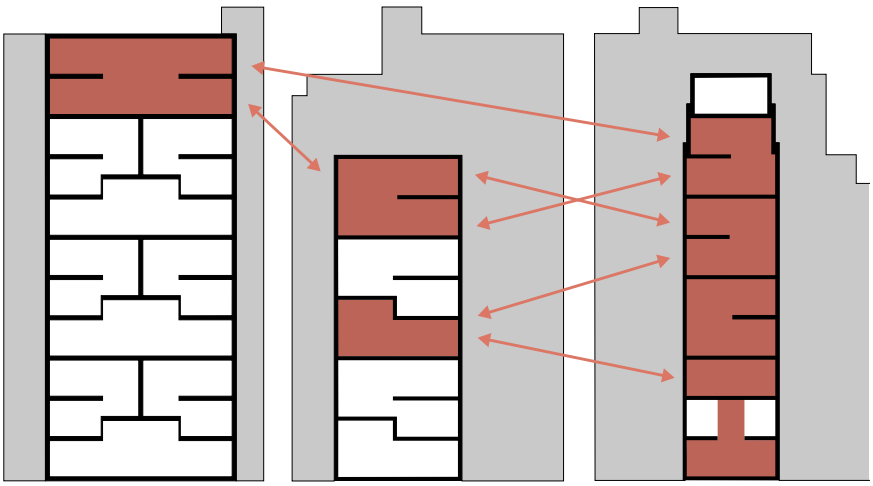


Figure 41: The communal functions are spread over different floors

Reacting with typology

using situations as a guiding principle

Thinking in situations was the main concept in the process to determining the placement of the functions and the lay-out of the suites. This results in a design that fits the needs of the Ronald McDonald House guests and that has the optimal layout, typologicaly speaking.

As told, the communal functions are mostly placed in the old Drill Tower. This is done in order to create a buffer, which arises from the understanding that when one comes home after a long day in the hospital, he or she would want to retreat to their suite. Therefore, it is desirable to have the communal spaces form a barrier between one's suite and the lively square. However, before going to the suite, the central hall of the building will be entered where one wants to be welcomed in a way that suits the state of mind. For that reason, the volunteer space and manager's offices are located so that the staff has a clear view of who is entering and with what emotion.

Since the stairs are part of the concept of the building, they are meant to be used. Imagining all the communal functions in one place of the building, people are more likely to take the elevator. To motivate people to take the stairs, the communal spaces are spread over different floors (Figure 41), so that only one or two floors would have to be travelled

between them. By stimulating people to take the stairs, the opportunity is created for people to enjoy the surroundings and clear their heads.

There are three different kind of suites, designed for the different type of guests of the Braidwood residence. The suites are designed so that the bedrooms are always on the back of the building, as far away from the square as possible. This will guarantuee the rest and peace that a bedroom requires.

The type A suite is a two-bedroom suite, accessible for wheelchairs (Figure 42-44). The bedroom, seating area and bathroom are all on the same floor. They are also a little bit bigger than in the other suites, in order to maneuver around in a wheelchair, but also to be able to stall it and still have enough space to move around on crotches.

The type B suite is again a two-bedroom suite, with a small seating area (Figure 45-47). This suite is split level, resulting in a playful suite that is more a tiny house than a hotel room. By having the two bedrooms on different levels, parents could easily take their child to bed. Then they can stay for another while in the seating area on the level in between the bedrooms, before going to their own bedroom without disturbing the child. Type C suite has the same concept as the type B suite, but has an extra bedroom and extra toilet (Figure 48-50).

All these different shapes of apartements are puzzled inside the towers, as shown in Figure 36. This creates a very dynamic effect, with great layering aspects that will be discussed in the next chapter.

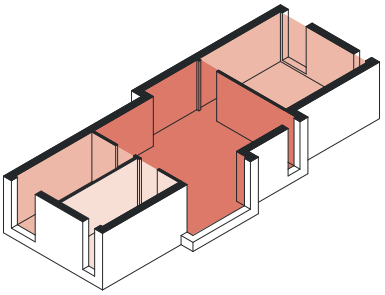


Figure 42: Type A apartment
axonometry

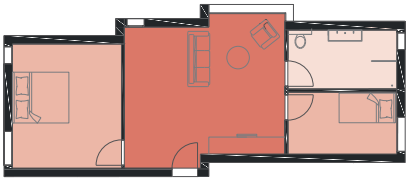


Figure 43: Type A apartment
floor plan

Figure 44: Type A apartment
interior

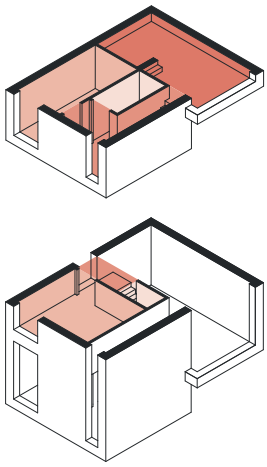


Figure 45: Type B apartment axonometry

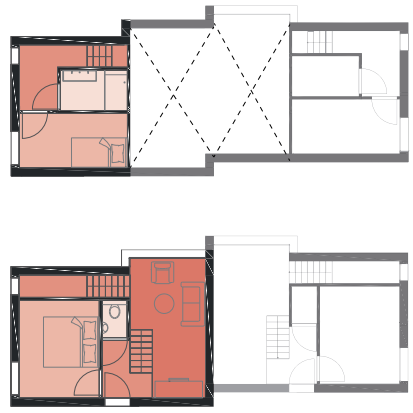


Figure 46: Type B apartment floor plan

Figure 47: Type B apartment interior

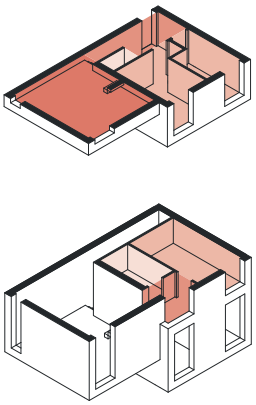


Figure 48: Type C apartment

axonometry

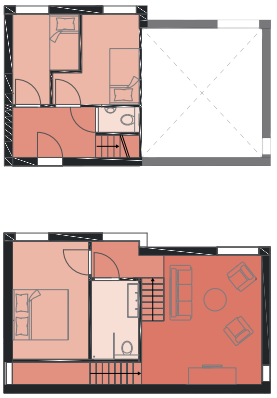


Figure 49: Type C apartment

floor plan

Figure 50: Type C apartment

interior

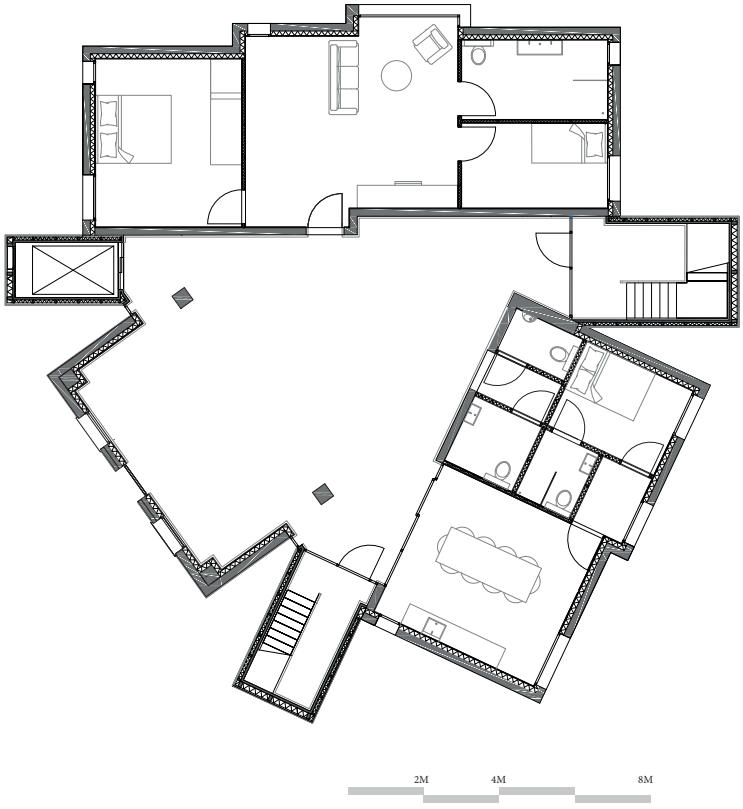


Figure 51: Ground floor, 1:200
- entrance, volunteer space,
type A apartment

The lounge, dining room, work space and fitness area have big voids to create visual connections. In this way, people can sit, work or sport on their one but can still see other people around them. Private spaces are created inside the bigger communal space to guarantuee a balance between privacy and contact. For example, in the kitchen this is done by creating little seating areas in cosy corners and by having multiple cooking stations so that you can choose to cook together or alone. The playroom is located on the same floor as a part of the lounge. In this way parents can watch their children when they leave the playroom. The lounge and dining are situated at the top floors of the volumes to create a roof terrace and provide amazing views. The youth base has a view over the lively square to keep the connection with other people and create a vibrant hang out for the teenagers.

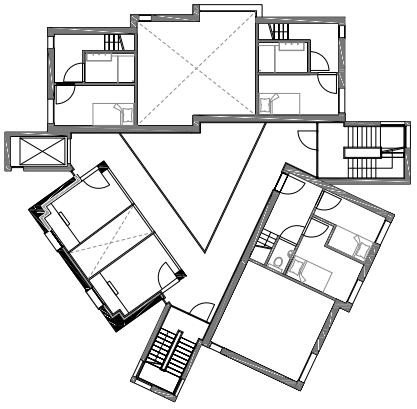


Figure 52: First floor, scaled to fit - offices, type C apartment, type B apartments

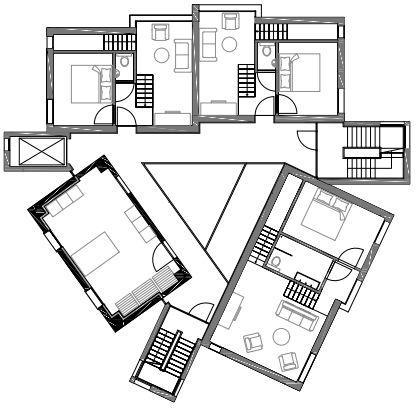


Figure 53: Second floor, scaled to fit - laundry, type C apartment, type B apartments

Figure 54: Third floor, scaled to fit - work/study, youth base, type A apartment

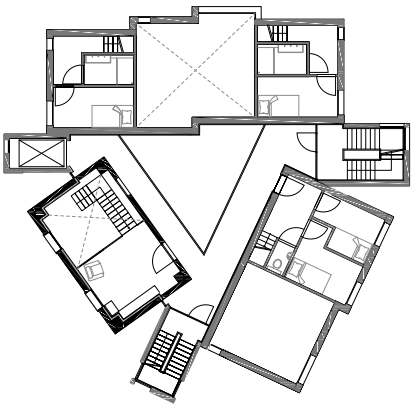


Figure 55: Fourth floor, scaled to fit - work/study, type C apartment, type B apartments

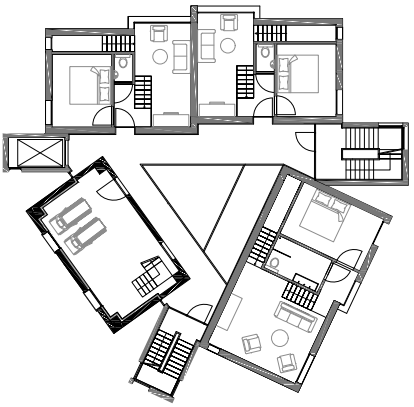


Figure 56: Fifth floor, scaled to fit - fitness, type C apartment, Type B apartments

Figure 57: Sixth floor, scaled to fit - fitness, lounge, type A apartment

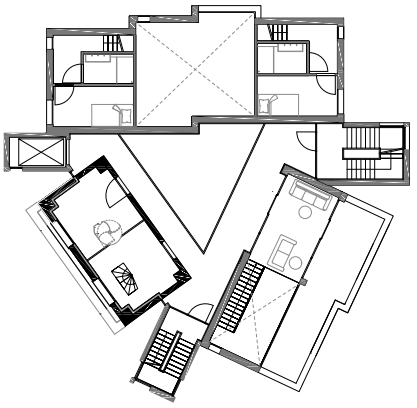


Figure 58: Seventh floor, scaled to fit - playroom, lounge, type B apartment

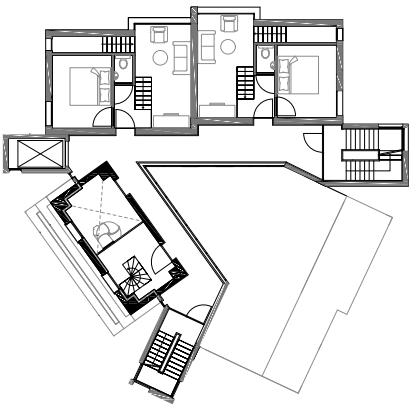


Figure 59: Eight floor, scaled to fit - playroom, type B apartment

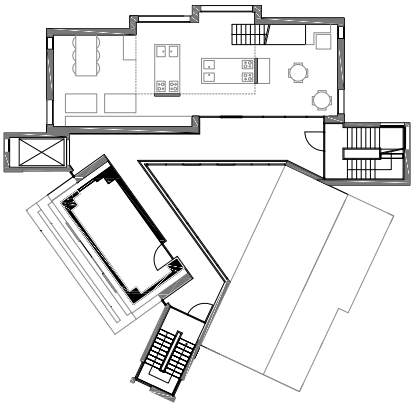


Figure 60: Ninth floor, scaled to fit - storage, kitchen/diner

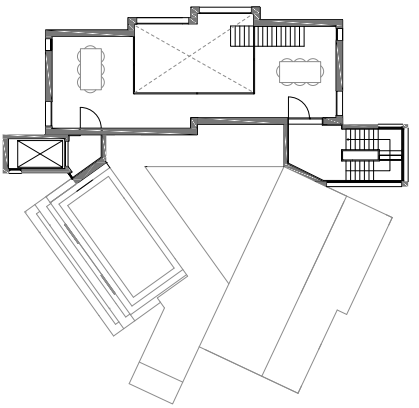


Figure 61: Tenth floor, scaled to fit - kitchen/diner

Figure 62: Shared kitchen

Reacting with layering

by creating visual connections

In the split level apartments, as well as the communal spaces with voids, the space is layered in heights. This results in very dynamic sightlines. Visual connections with people on different levels creates privacy, but also ensures the feeling of not being alone and feeling supported.

Because of the split level apartments, the galleries do not have to go all the way around on every level. Besides that, the level on which the entrances of these apartments are located alternates between the towers. This creates a very dynamic play of open and closed floors in the transportation zone, visible in Figure 39. By having some floors completely closed, and having galleries switching directions, different forms of interaction are stimulated. On the galleries, people are forced into interacting when passing one other. On the closed floors, people can avoid each other. This, and visual interaction in the form of eye contact between one gallery to another, contributes to the balance between privacy and contact.

By making use of windows on the inside of the volumes, layering as done in the square is also done in the building. For example, a sequence of spaces one can look through when walking on one of the galleries is transportation zone, Drill Tower, Braidwood Square and LFB Fire Station.

Reflection

on a Masterly Apprentice product

Figure 63: The Braidwood residence rises inbetween its surrounding buildings

Conclusion

to the design proposal for the LFB Headquarters

Braidwood Square is a vibrant place, where one would like to spend a part of the day. By the use of layering, interesting sightlines are created and people will be stimulated to discover the place.

Layering is also used in Braidwood Residence, by the use of visual connections. These connections contribute to the balance between privacy and contact for the Ronald McDonald House guests. To guarantee the best circumstances for the guests, the functions of the Residence are placed and designed considering its typological requirements.

The towers of the Braidwood Residence are purposely put very close to one other. This creates a certain positive tension between the volumes, as well as a negative space used as a buffer. The materialisation of this zone, as well as its function, contributes to this buffer. The vertical transportation areas of this zone, uses framing to show the residence's guests the most amazing views of the surroundings.

The overall proposal nods to its historical context by being named after James Braidwood. The building itself reflects a miniature city, relating to its urban context, by referring to the densily build metropolis London.

Reflection

and cirtical evaluation

While looking back at this graduation project, I notice a feeling of fulfillment. I feel proud of my accomplishment, happy to have had the opportunity to join this studio and grateful for everything I have learned.

Besides learning from the analysis of The Garden Museum, of which the reflection is written in Part I of this pair of booklets, I have also learned a lot from my own design process.

Firstly, I have learned that it is valuable, sometimes even necessary, to be critical at your own work, but also at someone elses work. For me, it was a challenge to be critical towards the ideas of Dow Jones Architects. It was necessary to reflect upon their design choices, in order to decide in what way I wanted to use their insights on the 6 main principles and implement these in my own design. However, by doing so I learned that you create an opportunity for yourself to learn from others, improve your own skills and broaden your horizon. In my design proposal, I have implemented the main principles that came out of the analysis, but I interpreted them in my own way. For example, Dow Jones Architects used natural light as a buffer and I have taken on the challenge to find other ways to implement this idea of a buffer, namely by means of function and material.

Furthermore, I have realised that it is not a bad thing to take a step back. In fact, when you are stuck in the design process, taking a step back might be helping you through it. I feel like my process was good, but I still have a hard time taking steps back. For the future, it will be helpful to realise that sometimes the only way to go foreward is taking a step back.

I have learned a lot about transforming a building, which is something I have always been interested in. For example, I got more insight how you could use materials to complement an existing building, without making your design invisible.

Thinking in situations by use of typology was really helpful, since the function I was designing was not the most common one. So, I needed to step into the mind of a Ronald McDonald House guest in order to get the priotities right. Talking to people with the experience helped me to come up with the additional functions in the Residence, and talking to the manager helped me get inside in a day of a Ronald McDonald guest.

Finally, I gained more knowledge about model making and the way it can help you in the design process. By making models, it becomes much clearer what your ideas actually entail, how they fit in the context and what they have to offer spatially. In this particular case, it was useful for the layering and framing topic, because it is hard to experience that on a computer. Also, using the right material for your model is of great importance, because it tells you something about the appearance of your design. By experimenting with this, you can easily see if you are achieving the right look and feel of your design.

I have really enjoyed working on this graduation project and am very happy with the final product. It has been a very intense process with ups and definitely also downs. Therefore, I am satisfied with the fact that I have completed the project like this. On the other hand, I also feel disappointment in the fact that the project is finished, since I have enjoyed my time in the studio and the time spending on this project so much!

To end this reflection, and with that my final year as a student, I would like to thank Jan Schevers, Jacob Voorthuis and Faas Moonen. Their help, support and critique got me to where I am now, and for that I am very grateful. Furthermore a big thank you to my family for their infinite support, and my boyfriend for his patience, help and motivation. And lastly, I owe a thank you to Alun Jones, for the great interview and information about the Garden Museum and to Wendy van den Akker for the interview and tour in the Ronald McDonald House Veldhoven. Thank you all!

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