Dutch mediation Dutch diplomacy
a design for the Dutch embassy in Oslo

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A design for the Dutch embassy in Oslo

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Introduction

In this graduation studio the design of a Dutch embassy in Norway is the key subject. Issues like diplomacy, identity and sustainability are playing an important part in this research.

In principle an embassy is a symbolic representation of a country within another country. At the head of this embassy is the ambassador who is a diplomatic of the highest rank, representing the head of state of the country that he is committed to. This diplomacy means that his/her function is to discretely mediate between the interests of the country that is being represented and the hosting country.

To extend the mediating function that the ambassador, and therewith the embassy has, the design of a new embassy can help by mediating also on other scale levels, to earn its rightful place in the city and to become an integral part of the everyday citylife. That is why the main question of this research is:

*How can a Dutch embassy in Oslo serve as a mediating element on different levels?*

These different levels mean the different scales the building can influence. The main function of the embassy is to conduct diplomacy between the Netherlands and Norway, so on country level the ambassador and the other employees of the embassy are the mediating element. The other levels that this design can have its influence on are the city of Oslo, its location and the design of the building. To answer this main question, three sub-questions are formulated that will each find their answer in different chapters.

*What is the identity of the Dutch and how does it compare to the identity of the Norwegian?*

*How can a park be improved in a sustainable way, to make it a more attractive place for the citizens of Oslo?*

*How can passive building methods be used in a Scandinavian climate?*
THE EMBASSY
Dutch diplomacy

The Dutch kingdom has 140 diplomatic missions worldwide, consisting of embassies and consulates. The embassies are established in the city where the government of the hosting country is located and the consulates are spread over the country.

The Dutch embassy in Norway is located in Oslo, the capital city. In addition there are consulates in Bergen, Larvik, Stavanger, Tromsø, Trondheim and a consulate general in Iceland.

This embassy maintains the relations with Norway and represents the interests of the Netherlands. Dutch people that live abroad or stay there temporarily can turn to the Dutch embassy for consular documents, like passports. The embassy can also offer them help when they get in trouble, for example an accident or arrest. Foreign people that want to travel to the Netherlands can turn to the embassy for the necessary documents. Finally, the embassy gives Dutch companies support with their international activities in that country.¹

The grounds of the embassy and the residence of the ambassador enjoy immunity. That means that the Norwegian authorities may not enter them without the approval of the ambassador. The embassy and the residence are no small pieces of the Dutch territory, as many people think. They enjoy immunity, but are still Norwegian territory.²

Currently 12 people are employed at the Dutch embassy in Oslo, divided over five different departments. Economy, public diplomacy and culture, Defence, Civil affairs / Consular affairs, General Affairs and Agriculture, Natura and Food quality.

² “Nederlandse Ambassade in Oslo Noorwegen.”
Current buildings

The current embassy building is located on the Oscars gate 29, in the Homansbyen district, a central area in Oslo. In this district more embassies are settled and the ministry of foreign affairs is located on a close distance. The building is built in 1967-1968. It was designed by the architect Wilhem von Hanno, who was also the first inhabitant. The style of the building is very similar to Italian renaissance.

In 1946 the Dutch state at first rented the building, until they bought it in 1952 and started using it as an embassy which they still do. They did make a few adjustments to the building in the meantime to modernize and restore the building. Like a glass security entrance at the back of the building.\(^3\)

The embassy is used as an office and the accompanying residence is in the first place used as an accommodation for the ambassador, but also for representation. Important diplomatic diners and gatherings are held here.

The residence is not attached to the embassy. In fact the residence is located 1.5 kilometres away at the Gyldenlovesgate, in front of the world-famous Vigelandpark. It was built in 1907 and designed by architect Karl Høie. It is a characteristic villa plastered in pale green with elements from Italian classicism and neo-baroque. From 1944 this building is used as the residence of the Dutch representative. Today it is also possible for companies to rent the first floor of the residence for special occasions.\(^4\)

\(^3\) Ibid.
\(^4\) Ibid.
Requirements new embassy

The programme of requirements for Dutch embassies that is used nowadays by the ministry of foreign affairs, differs from the one used in the past. Where in the current embassy every employee has its own office, in the new guidelines flexible workspaces are preferred, so there is no hierarchy in the embassy anymore and people are expected to work in a modern way. Which means that they also have home working days. In this way only 70% of the current workspace has to be used.

Only the secretarial section and the consular area will have their own office because their tasks require a fixed workspace. The consular area is secured from the rest of the building, because important matters, like passports and travel documentation, are handled here. The front desk of the consular area is the place where visitors come, by appointment, to arrange their matters. The secretarial section needs an office near the entrance of the building to be able to welcome and provide access to (important) guests.

When there are no separated offices anymore, an additional large meeting room is required as well as spaces where people can work in silence or make video calls. When receiving guests there has to be a ‘best room’ that can also be used for other purposes.

The accessibility of the embassy is also an important factor. It has to be easy to reach by car, bike and public transport, and it is convenient if it is located near the ministry of foreign affairs.

The functionality of the embassy is important. Dutch are functional so prestige is not very high on the agenda!
The new building

When evaluating the current buildings for the implementation of these new requirements it soon became clear that they are not able to meet them. The current embassy has a far too big surface and is a concatenation of small rooms that are not linked whatsoever, making flexible working and communication between employees difficult. The Italian style of the building does not link to the Netherlands in any way, so this building does not relate to the Dutch culture in appearance.

The residence is meant to provide a home for the ambassador during his/her intensive period of service and is therefore also an important part of the embassy. The distance between these two buildings is not convenient. That is why these two buildings will be sold and replaced by a new embassy building that is composed together with the residence. This way the amount of square meters will be reduced and the building will be a lot more functional and Dutch.
COLLECTIVE MENTALITY
Dutch Identity

In the search for a Dutch identity, at first all kinds of cliché’s come to mind. Wooden shoes, windmills, tulips and so on. These are mostly ‘typical Dutch’ things that have been exaggerated as such because of commercial purposes. But an identity is much more than something that can be captured in an object.

Identity seems like a simple concept, but can be interpreted in many different ways. Some people may conceive it as a representation of themselves, while others see it as an image that other people have about them. As Joep Leersen, Dutch literary theorist and historian, states: ‘Identity is more a way of seeing than a way of being, and that way of seeing comes from two sides, the inside and the outside.’ With this he means that people give themselves a certain identity, but this identity doesn’t have to correspond with the identity that others grant to this individual or group of people. So identity is always in the eye of the beholder.

In their book ‘De alledaagse en de geplande stad’, Arnold Reijndorp & Leeke Reinders write the following: ‘The remarkable, almost always positive, self-image of a group is corrected by the image that others have of this group. A self-image always is the selective product of the group that dominates, which almost never covers the society as whole. This counts as well for the country, as for the local community or city district.’

That’s why it is impossible to point out one true Dutch identity. Partly due to multiculturalism and globalisation it is becoming harder and harder to extract one identity where all people living in the Netherlands can identify with.

In February Herman Pleij, professor of medieval literature at the University of Amsterdam, gave a lecture about the Dutch identity at the TU Eindhoven. Immediately in the beginning of this lecture he denies the existence of a Dutch identity and instead of this replaces it by the notion of a ‘collective mentality’ that is formed by the norms and values that a group of people lives by. This collective mentality allows people to live together and form one society. These norms and values are closely related and developed during our history. In his book ‘Moet kunnen: Op zoek naar een Nederlandse identiteit’ characteristics of this Dutch mentality are discussed. Important factors in the Dutch collective mentality are pragmatism, equality, flexibility (which can be linked to tolerance) and moderateness. Characteristics which are closely related in the Dutch roots. Scholars from Erasmus to Huizinga appointed moderation and flexibility to the essential characteristics of the national character. Erasmus saw this
adaptability as a great virtue, formed by our rich trade history, always respect the morals of the country in which you are staying, do not reject them but take them over and learn to live by them. Furthermore everything with the word ‘too’ before it can never be good, every form of extremism is strange to the true Dutchman. Moderation is the virtue that adorns this pragmatic nation. This efficient virtuousness is not only ruled by the aim for equality and the aversion to hierarchy, but also by the elevation of pragmatics as a guideline for life.

In the design of a Dutch embassy this collective mentality should be the main principle and should be perceived in the use of the building. This way Dutch people will feel at home while foreigners will get an understanding in how our culture works.

Of course this collective mentality, just like an identity that can be seen from different point of views, has always a certain relation with the country that is compared with. Characteristics can stand out in comparison but can also fade because of cultural similarities.

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6 Reijndorp, *De alledaagse en de geplande stad: Over identiteit, plek en thuis,* 30.
7 Ibid.
8 Ibid.
The Dutch mentality vs the Norwegian mentality

Since the location of the embassy is in Oslo it is important to compare the Dutch culture to the Norwegian culture. So the embassy can be a building that is breathing this Dutch mentality and therefore is still adapted to the Norwegian culture.

A useful tool when comparing these cultures is the Geert Hofstede index, a tool originally developed for management and organisations. He defines culture as ‘the collective mental programming of the human mind which distinguishes one group of people from another.’ In this index countries are valued on 6 different dimensions and the values of different countries can be compared. These dimensions are Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Pragmatism and Indulgence.

When comparing the Norwegian values to the Dutch, at first sight it seems that the cultures are not that different from each other. But when taking a closer look it shows that some dimensions have more similarity than others. The Dutch do score higher on long term orientation compared to the Norwegian who clearly score a lot lower in this dimension, which shows that the Norwegian value their past and traditions more than the Dutch do. On the other hand they show a lot of similarity in the dimensions Power Distance and Masculinity. The aim for equality is high in both countries as is shown in the relatively low values on Power Distance. This category shows the following characteristics: ‘Being independent, hierarchy for convenience only, equal rights, superiors accessible. Control is disliked and attitude towards managers is informal and on first name basis. Communication is direct, participative and consensus orientated.’ On masculinity the values are even lower. ‘This means that the softer, feminine, aspects of culture are valued and encouraged such as levelling with others, consensus, “independent” cooperation and sympathy for the underdog. Taking care of the environment is important. Trying
to be better than others is neither socially nor materially rewarded. Societal solidarity in life is important; work to live and do your best. Incentives such as free time and flexibility are favoured."

Those are the characteristics that are used in the design of the Dutch embassy in Oslo to mediate between the cultural differences and to embrace cultural similarities, which will be used to make an intrinsically Dutch building that is adapted to its Norwegian surroundings.

As the current ambassador, Bea ten Tusscher, puts it: 'I understand now why The Netherlands and Norway think alike in international fora like the VN and the NAVO and why Dutch people feel at home so easily here. We mostly have the same view on society and politics and we like no nonsense, openness and directness.'

Table 1: Geert Hofstede index, comparison Norway and Netherlands

![Image of table](image)

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10 “Country comparison.”
11 Ibid.
**Functionalism**

Also in their architecture the Dutch and the Norwegian share some history. In both countries functionalism played a big and important part in the development of what its architecture is today. The style period of the functionalism in comparison to contemporary Norwegian architecture will tell something about the way that architecture has evolved over time and give inspiration for the approach of the Dutch embassy design integrated in Norway. Since the Dutch functionalism has played a big part in the development of the Norwegian functionalism, first the Dutch functionalism will be discussed.

*Dutch functionalism*

The functionalistic movement was an international trend, starting from the 1920’s. In the Netherlands there was the movement ‘Het Nieuwe Bouwen’ that was a local variation on functionalism. In the book ‘Functionalism in the Netherlands’ Jan Derwig and Erik Mattie explain the development of this modern movement in the Netherlands. They describe the differences between the international functionalism and the Dutch Nieuwe Bouwen:

In this Dutch version the emphasis was often on the rational, scientific aspect. Another important difference between the Dutch Nieuwe Bouwen and Functionalism in other countries is the Nieuwe Bouwen’s exceptional previous history, because in the beginning of the 20th century this movement was closely related to another avant-garde movement: De Stijl. Like the Nieuwe Bouwen, De Stijl sought to break with the individualism of the past, with the old styles and their hierarchical orders. Materials and techniques were the most important objective for the design, not the means. Materials used materials were steel, glass and concrete, and in Holland also brick. Of course these materials were already known, but their possibilities have never been so systematically and exhaustively exploited as they were in functionalistic buildings. The details were very minimal but also extremely refined and also by using standard materials a decorative effect can be achieved.

This description of the Nieuwe Bouwen is not only applicable on the outside. Often the interior was considered to be more important than the exterior. The furniture, too, was functionalistic. Thus, everything was apparently geared to practical use rather than to external form. So it seemed.
The attitude of the Nieuwe Bouwen towards aesthetics was complex. Here too the influence of De Stijl, with its principle of the rectangle and the straight line as the only non-arbitrary forms, made itself felt. As one of the architects working on the Van Nelle Factory by Brinkman and Van der Vlugt, architect Mart Stam protested vigorously against the curve in the administrative building and the so-called ‘chocolate box’, that is, the circular directorate’s room above the tobacco wing. In Stam’s view, both elements detracted from the purely functional (read, rectilinear and angular) design.\(^{17}\) Rietveld took a different view. He did not believe in the Nieuwe Bouwen’s emphasis on the purely functional. Nor did he believe that construction and aesthetics need to be mutually exclusive.\(^{18}\)

Whether or not this beauty was desirable, the architects did agree on one point: the unnecessary decoration of buildings should always be avoided.\(^{19}\)

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\(^{13}\) Jan Derwig and Erik Mattie. *Functionalism in the Netherlands.* (Amsterdam: Architectura&Natura, 1995), 7.

\(^{14}\) Derwig and Mattie. *Functionalism in the Netherlands.* 18

\(^{15}\) Ibid. 20

\(^{16}\) Ibid. 24

\(^{17}\) Ibid.

\(^{18}\) Ibid. 25

\(^{19}\) Ibid. 25
Norwegian functionalism

Until the end of the 19th century Norway was one of the poorest countries in Europe. It is a big country with a remarkable small population that has to battle against extreme cold and short days with very little arable area (4% of the area of Norway).\textsuperscript{20} This poverty made the Norwegians practical. They had to put their energy and their creativity towards solving the many practical problems of life. The thin spread of the population and scarcity of resources did not make a base for a rich material culture.\textsuperscript{21}

This caused the Norwegian building culture to stand very close to nature. The way the Norwegians make use of the most (and one of the only) available material in their country, wood, in their building traditions is still an inspiration to architects today. Hardly anywhere else in Europe does one find an ancient wooden architecture of a similar formal richness and structural clarity.\textsuperscript{22}

When modernism started to affect architecture it was therefore immediately welcomed into the Norwegian building culture. The functionalism fitted the Norwegian’s practical character. In his book ‘Modern Norwegian architecture’ Christian Norberg-Schulz describes this important period for Norwegian architecture and it’s important highlights:

In the beginning of this period, in 1925, Lars Backer wrote an article in Byggekunst entitled ‘Our spineless Architecture’:

‘We shall create an architecture in contact with the times in which we live, suited to the materials with which we build. We shall abandon concealment and all exterior frippery, function shall decide the form. Plan and façade shall be as one.’

When Lars Backer adopted the new architecture he was in the vanguard. A modern construction was still a rarity, and several of the most important pioneering works were built later. Backer’s importance as a pioneer is based first and foremost on his very early 1925 project for Scandinavia’s first modern building, Skansen Restaurant in Oslo, completed in 1927. In his description of Skansen Backer wrote:

‘To build is no longer ‘architecture’ in the old-fashioned sense of the word, with rules and strict stylistic categories, classified and organized by writers on art. It becomes good architecture, however, in so far as the construction is rational and suited to its purpose.’\textsuperscript{23}

After finishing the Skansen Restaurant Backer started on Ekeberg Restaurant. Although the site demanded a different main form, the means are the same: a clear skeleton construction, large and open floor areas, and continuous sections of glass. Features of
Dutch De stijl architecture appear in the building’s interplay of horizontals and verticals an in the outdoor terraces, which here too are finely attuned to the landscape.\textsuperscript{24}

In the beginning there were some doubts about the aesthetic of the functionalism. For example Ove Bang argued: ‘… I could not manage the problem of making the houses beautiful while at the same time as practical as possible. So I gave up the question of economy. No matter how important it is that a house be inexpensive and practical, it is even more important for me that it is beautiful. There are enough people who can make utilitarian and economical plans, but to make them beautiful is the problem.’\textsuperscript{25}

That’s why in 1928, Norwegian architects organized a study tour to Holland, where they visited buildings by Berlage, Oud, Duiker, Dudok and others.\textsuperscript{26} It was, no doubt, the new Dutch architecture which showed Norwegian functionalists that it was possible to be modern and still use a local meaningful idiom.\textsuperscript{27} This studytrip had a liberating effect, amongst others on Ove Bang.

In a number of wooden houses Bang built in Aker (now part of Oslo) Norwegian and modern characteristics are fused. It is typical that all these houses have a simple, traditional form, but inside Bang has developed a decidedly functionalistic plan. He demonstrated the way in which large areas of glass may be introduced without breaking up the main volume and the modern architecture’s aim towards a ‘flowing’ transition between spaces. According to the theory of Functionalism it is the plan that ‘dictates’ the facades.\textsuperscript{28}


\textsuperscript{21} Ibid.


\textsuperscript{23} Ibid. 47

\textsuperscript{24} Ibid. 49

\textsuperscript{25} Ibid. 60

\textsuperscript{26} Ibid. 51

\textsuperscript{27} Ibid. 53

\textsuperscript{28} Ibid. 65
This shows that there are a lot of similarities in the Dutch and the Norwegian functionalism. Of course because it was an international style, that was communicated during the international CIAM, Congrès internationaux d’architecture modern, but also because of the Norwegian interest towards the Dutch view on functionalism, the nieuwe bouwen.

But there are also differences between these two local interpretations of this modernistic style. Differences that already start with the way functionalism emerged into the countries architecture. The Dutch Nieuwe bouwen was mainly focussed on the rational approach. Practical floorplans where light, air and space played an important role. With the core approach: design should be based on its function, no unnecessary decoration. There were movements that thought about the combination of function and aesthetics, that promoted that construction and beauty didn’t have to be mutually exclusive. Still the main focus was on the purely functional.

In the beginning of the functionalistic movement the Norwegians also struggled with the integration of functionality, beauty and nature into their designs. During their study trips to Holland they learned a lot about this integration and it didn’t take long for them to take this to a higher level. Although in this period the focus was mainly on function and less on beauty, their attachment to nature and local traditions this still kept showing in their designs because they were not able to completely eliminate these personal values. Here the foundation of Scandinavian design principles were formed: prioritizing functionality without eliminating grace and beauty.

Today the functionalism still shows in ‘Scandinavian Design’, although in contemporary Scandinavian design there is a balance between function and aesthetics. Design that can be described as beautiful, simple, clean design, inspired by nature and the Northern climate, accessible and available to all.  

When looking at successful projects of contemporary Norwegian architecture they can be characterised by readable form, simple use of (natural) materials and a clear attitude to landscape as well as social context. Qualities of the Scandinavian design but also the strong connection the Norwegian have towards nature and genius loci, a term introduced by Christian Norberg-Schulz that describes the ‘spirit of a place’, the individuality.

In the design of the embassy this architectural clarity will be the main concept to show the functionalistic similarities the Dutch and the Norwegian share in history, but also in character. It is probably because of their pragmatic mentalities that the functionalism fitted them so well. The design of the building will mediate between the different views on functionalism so that both parties are satisfied. It will be a Dutch functionalistic building that uses its construction, elements and features to create a certain beauty and connection with its surroundings.


30 Ibid.

Use of the embassy

The design of the embassy will show Dutch mentality and functionality in its layout and functioning. While using the building the concepts of pragmatism, equality, flexibility and openness should be experienced by the way that it is functioning.

To design a functional embassy the users and the functions have to be clear. In this building there are 3 types of users and 3 types of functions that overlap each other.

<table>
<thead>
<tr>
<th>Users</th>
<th>Visitors</th>
<th>Employee</th>
<th>Ambassador</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functions</td>
<td>Consular area</td>
<td>Workspace</td>
<td>Residence</td>
</tr>
<tr>
<td>Requirements</td>
<td>Separate Entrance</td>
<td>Meeting room</td>
<td>Representative space</td>
</tr>
<tr>
<td></td>
<td>Waiting area (30-50 m2)</td>
<td>(20 m2)</td>
<td>(50 m2)</td>
</tr>
<tr>
<td></td>
<td>Toilet</td>
<td>Quiet workspaces (2 x 15 m2)</td>
<td>Kitchen (20 m2)</td>
</tr>
<tr>
<td></td>
<td>Consular area (30-50 m2)</td>
<td>Canteen (30 m2)</td>
<td>Living room (20-30 m2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wardrobe</td>
<td>Master bedroom (20-30 m2)</td>
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<td></td>
<td></td>
<td>Toilets</td>
<td>Children’s / Guest bedrooms (2 x 20 m2)</td>
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<td></td>
<td></td>
<td></td>
<td>Bathrooms (6-10 m2)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Terrace</td>
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<tr>
<td></td>
<td></td>
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<td>Toilet</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Storage</td>
</tr>
</tbody>
</table>

Table 2: Table of requirements

This table is showing the requirements per function and user. When looking at this table in a pragmatic way certain connections can be made. When using space in the most practical way it is logical to join spaces that have similar demands so that the same area is used for more than one purpose. The functions that have overlap of users in the program of requirement will be merged and these parts will form the cores of the embassy.
Since it is in the pragmatic Dutch nature to be sober and down to earth it is not obvious to reserve a room that is only used for representation. Therefore the first core is the kitchen of the residence (1) which is drawn by the canteen of the embassy. Spaces that are both used for dining, relaxing and socializing. When needed, the two spaces can form one big space that is able to host dinners and other events. Guests are invited into the kitchen of the ambassador to discuss important matters over dinner, which is reflecting Dutch kitchen table rituals. Since the early Batavians the Dutch have a desire to arrange everything that is of significance at the dining table. Starting with the example of Julius Civilis, who convinced the Batavians’ to take up arms against the Romans during a banquet. And still, even within the smallest group of interest, the family, it seems like dining together is used to accentuate the mutual connection. Plans are created and sealed at the dining table, even in Dutch painting a genre is dedicated to the portrayal of dining groups. (See image) So the big dining space forms one core of the embassy and is also the place where the embassy and the residence meet each other.

The second core is the consular area. (2) This is a part of the workspace of the employees but also the place where visitors can make an appointment to arrange their business. It is the most sensitive area of the embassy, so it has to be properly secured, while the other workspaces do not need so much security. The consular area will therefore form the second core of the building, connecting the embassy to the public space, that is open to visitors.

THE LOCATION
The requirements that are imposed for the location of the embassy are:

- A place in the city that shows a link to the concept.
- On the border between vibrant city life and a more quiet recreational area, because the Norwegians as well as the Dutch value the balance between work and leisure a lot. So it is possible to have lunch and meetings in nearby café’s or restaurants, or conversely, to spend free time in a quiet and natural place. This way the boundary between work and leisure can be minimized.
- A short walking distance to the ministry of foreign affairs is preferred by employees of the embassy.
- Easy accessibility.

Two locations were selected for the embassy. Both met the requirements and could serve as a nice and special place for the embassy.

Location 1 marks the spot where the first Norwegian functionalistic building was located, Skansen restaurant designed by Lars Backer, laying in between city hall and Akershus fortress. The building was demolished in 1970 because it was considered to be disruptive for the monumental fortress. Because of the important role the Dutch functionalism played for the development of the Norwegian functionalism this would be a symbolic place to give a Dutch functionalistic building back to the Norwegians, in Norwegian surroundings, with Dutch roots.

However, in the meantime this location became an important part of the public space of Oslo and this should also be taken into account. As well the reason that the Skansen restaurant was demolished in the first place should also be considered.

Location 2 that is found to be suitable for the embassy is Hydroparken. A park on private property of the Norwegian hydro, that is opened up to the public. The current design of the park is made in 1960, and has a modernistic style. However the park does not quite seem to fulfil its public function and it could benefit from some redesign to re-establish its attractive qualities. By locating the embassy on the edge of the site it could serve as a mediating element between the city and the park. By adding, moving or removing elements this park can be an important, frequently used, green spot for the city again. This location will be used for the design.
Hydroparken

The site is located on the west side of the city center of Oslo, right on the edge between the vibrant center and a residential area. A place that offers the possibility to create a quiet working environment that is within reach of restaurants, cafés and other leisure activities the center has to offer.

The area is easy to reach with public transport (figure 8), bus lines and tramlines have stops in front of the site. One of the main exit roads of Oslo passes the plot (figure 9), so it is also easy accessible by car. The park is also used as a shortcut for pedestrians (figure 10).

The park is situated next to the 14-storey concrete office building that houses the Norsk Hydro and in front of the national library, that in the past served as the university library. The park is approximately 5 hectares in size and owned by the Norsk Hydro. When they bought the grounds in 1960 to build a new headquarter they decided to open up the park to the public, because it wasn’t used much before when it functioned as a private domain. So the site belongs to the public domain since 55 years.

The current design of the park is made by Morten Grindaker in 1960, one of the biggest landscape architecture offices in Norway. He was contacted by architect Erling Viksjø who won the design competition for the new headquarters for the Norsk Hydro and needed a garden architect for the adjacent park. The site for the building belonged to the Mogens Thorsen Foundation, a home for the elderly with a large landscaped park with many different tree species. These, and natural conditions in general were in accordance with the city council requirements, to be preserved to the greatest extent possible. In addition, the builder - Norwegian Hydro - did not want to have public areas near the building. The park is therefore isolated from the building, but the design is inspired by the Viksjø façade with right angles, rectangular shapes, and long
walls that extend into the green park. A recessed space surrounded by walls with long benches and freestanding walls with artistic decoration by artist Odd Tandberg form a sheltered area with a rectangular pool and fountain. The composition very modernistic, with rectangular, overlapping surfaces and continuous lines.\textsuperscript{34} The final design is shown in figures 11 and 12. The form concept differs clearly from the municipality’s desire to preserve the natural feel. In a review in the Danish Journal Havekunst nr 1, 1963, Garden architect Olav R. Skage gives a positive review but he also says that the public’s main complaint against the park is that it lacks ‘pleasurable’ decorative planting and that the layout is not what the ‘man in the street’ will call exiting.\textsuperscript{35} So at that time there were already ‘users’ that were not satisfied about the design.

\textsuperscript{34} Jørgensen, Karsten. Landscape as art and architecture: The Hydro Park and the renewal of the Norwegian landscape. Norwegian University of Life Sciences.
\textsuperscript{35} Karsten, Landscape as art and architecture: The Hydro Park and the renewal of the Norwegian landscape.
Figure 12 shows the design of the park as it was realized by Morten Grindaker. The park is drawn all the way around the office building that is surrounded by green zone.
Today the area of the plot that is still functioning as park has decreased. The plan of 1960 shows the park as it is situated around the building, but an extension that is realized at the western side of the office building covers almost the whole park at this side of the building. Another building is added at the south side. In figure 13 the current park site is highlighted.

Figure 13: Current park site
Through the years the trees in the park have grown enormously and the park is at tree height covered in green. A monument in honor of the national press freedom is added to the composition of Morten Grindaker, making a connection with the walls designed by Odd Tandberg.

The current state that the park is in can be questioned. The recessed space that is formed by the walls, benches and pool is forming a shielded spot that is out of sight from the adjacent roads, even more with the trees that have grown over it. Some pictures even show people using this place as a place to sleep.

The task at this level is to mediate between the modernistic park design of Morten Grindaker, the city and its residents, who are the main users of the park, and the functionalistic design of the embassy that will be implemented into the park. This way the embassy will be situated at a location where pleasure and work don’t have to be far apart and the park will be an attractive place for the city again and will be more included in the urban fabric. They are both having an advantage with the arrival of the Dutch embassy. To be able to make statements about possible adjustments that would have a positive impact on the park the current situation will be analyzed.
In this chapter the overall approach for the design of parks is discussed and the parts of the hydroparken are analyzed to be able to make it a functional place again.

To be able to say something of the design and the elements of a well-functioning park, it is important to know what this function is. Who are its users and what is a park used for? Simply put, a park is a green place in or near a city where people come to spend their leisure time. Since this place is a public city space, meeting and interacting with other people is playing an important role for the functioning of the park. Jan Gehl, who did research on the changes of city life through history, states: ‘Meeting other people has been the most important function and attraction of the city, and city space has had a central role as meeting place. Now, as before, city space is the framework for people’s meetings with society and each other.’ So since a park is an important part of the city’s public space it must provide enough opportunities to support and encourage this interaction. This means all members of society should be able to make use of this park and feel attracted to spend their leisure time here.

In their research on park design Robin C. Moore and Nilda G. Cosco use a multi-method approach to the factors that make a park socially inclusive and universally designed. ‘The question turns on the role of urban landscape design in achieving this and challenges designers to provide high quality public spaces that offer more than a merely pleasing physical environment. The main question is, what tools do park designers need to create such recreational environments that would support social inclusion?’ By using behavior mapping, behavior tracking, park visits with people with disabilities, setting observations and interviews with users they learned how a universally designed park was used and perceived. Overall the findings suggest that park users were attracted by the areas with manufactured play structures, including swings and sandplay, the varied gathering settings and the primary pathways. The relatively high use of gathering and pathways settings indicates the social attraction of the park. High quality, family play area environments are crucial vehicles for inclusion because children’s play is such a powerful means of communication – both between children and between children and adults. High quality family play environments can stimulate free flowing, positive interaction among park users of all kinds. So by creating various gathering and pathway settings and children’s play areas the park will become more attractive to a bigger and varied group of people.

When using these results for the adjustment of the park it makes sense to first analyze the current existing qualities of the park before making design decisions based on the findings of the research.

37 Thompson, *Open space, People space,* 85.
38 Ibid, 87.
In the book ‘Form and Fabric in Landscape Architecture’ by Catherine Dee the various layers of which a park exists are explained. These parts are Spaces, Paths, Edges, Foci and Thresholds.

The approach to start with when redesigning a park is to take the existing structure into account. Catherine Dee explains in her book: ‘Sweeping away old landscape for new is sometimes confused with creativity and originality in design. A tabula rasa approach to landscape architecture, where existing site conditions and landscape elements are cleared or ignored, is inappropriate in nearly all contexts for several reasons.41

First, recycling and conservation of materials, structures and vegetation is desirable for sustainability reasons.
Second, landscape accrue meanings and distinctive qualities over time and through use. Landscape design can be seen as a process of adding other layers of form and meaning that integrate or juxtapose to older layers and meanings.

Third, vegetation (particularly trees) takes many years to mature and to offer environmental and aesthetic benefits so wherever possible, trees and vegetation of ecological value should be conserved.

Fourth, landscapes – however degraded – often have uses and meanings for local people. The landscape architect must always seek to find out about and understand site uses before developing proposals for a site.42
By ‘deconstructing’ the different layers the integration of the park will be illustrated and the traits of the existing structure will show.43

So by keeping the park in tact as much as possible and making small adjustments to make it more functional, the park will keep its existing qualities while adding new ones.

42 Dee, Form and Fabric in landscape architecture: A visual introduction, 15.
43 Ibid, 22.
Spaces

1. Open space, grass with some trees
2. Recessed space, between objects
3. Space pinched between walls
4. Green space, transition between park and road

In the park there is not a big variation in different kinds of spaces. There is the composition of the walls and the pond where users really feel that they are in an area that is designed for leisure activities. The rest of the plot exist out of big lawns that function as buffer between the composition of Morten Grindaker and the adjacent roads or as circulation areas. The park would be more interesting when more different gathering spaces are available and they are more dispersed over the plot.

Paths

1. Access road, sweeps along edge of park
2. Entrance paths
3. View paths, highlight view towards south (benches on north)

The paths are mainly located around the composition of Grindaken. This is also a reason that the rest of the plot has been used less. Pedestrians have even created a path for themselves that is providing them a shortcut from the South to the North side of the park. So this shortcut should be taken into account in the new design and the existing paths should be extending deeper into the park, so the other parts will be used more frequently.
**Edges**

1. Edge Park-Road
2. Edge by height difference
3. Objects form edge
4. Water edge

Edges create a transition from the one area into the other. The more different edges there are, the more variation in the structure of the site. For edges the same applies as for spaces, when more variation can be created the park will be more interesting and therefore more attractive for users.

**Foci**

1. Walls
2. Monument
3. Pond

The foci, that are attracting the users attention, are also centered in the composition. The focus is here so the rest of the plot is giving a quite bare and empty feeling. The focus should be spread towards the center of the plot.
Thresholds

1. Park entrance
2. Height threshold
3. Gate effect

To be able to include people from all levels of society physical thresholds should be avoided. The stairs covering the height difference have to be transformed to slopes so elderly and disabled people can have easy access to the park.
The adjusted park design

To make the park a more attractive and inclusive place the existing layers of the park will be extended further into the park, with respect to the previous layout designed by Morten Grindaker. So the existing features like the walls designed by Odd tandberg will be kept in place, because they form an entrance for the park and a composition with the Norsk hydro building in its background.

The pond in the middle attracts people into the park, so it will be moved more towards the center of the park where it functions better. A childrens play area and varied gathering settings will be created to attract more people into the park and the stairs to cover the height differences (> 4 m) will be replaced by ramps so the park is accessible to all people of society.

The embassy will be located at the narrow southern end of the park. This way the park isn't scattered into pieces and it keeps functioning as a buffer between the busy city center and the more quiet residential area that meet each other here. A sunlight experiment that has been conducted indicates that this place would be the best for gaining solar heat, although it did not really differ a lot with the rest of the plot.

This is also the lowest part of the plot. Since the building will be a part of the park, it should be integrated in a subtle way. By making use of height differences a part of the building can be hidden, the showing part has a fort-like appearance with plants that grow across the roof edge to merge the building and the park.
Figure 24: Elements park design
1. To spread the foci further over the park the pond of the original design was pulled towards the center of the park to attract people deeper into the park. People tend to judge water as to be a preferred or attractive feature in a scenery. By letting the water flow around the embassy building it becomes a part of the composition. This way the water also forms a buffer between the park and the building and forms a safety shield from the public domain. Security is an issue that an embassy has to deal with and an embassy in the middle of a park has not many security of its own. So a barrier between the park and the embassy has to be created to ensure safety. Throughout history the Dutch have been using water for protection against the enemy. By inundation, strips of polder landscape were flooded to keep the enemy on a distance. This is also known as the Dutch water defense line. So by flooding the area around the embassy a barrier is created around it and some kind of fortress-like status is given to the embassy. This way the water mediates between the park and city through its attractive characteristics and between the park and the building by forming a buffer and involving the building in the composition. At last the water can be used for water purification by using a helophyte.

2. To realize varied gathering settings that will attract more groups of society, stepped water seats have been created. The existing benches that are placed with their backside towards the higher platform look out over the park into the south-west direction. With the new layout of the park they actually have something to look at so they are being preserved. Those are more individual side-to-side seats, so seating places where bigger groups of people can gather will be added at the waterside.

3. The childrens play area is placed on a sheltered place in the park, away from the busy street side. But from all over the park this area can be monitored.

4. The existing modernistic features of the park, the artistic walls by Odd Tandberg and the monument for national press freedom, are being preserved. As is the Modernistic appearance of the park with its right angles and rectangular shapes. The added features comply with this modernistic structure. The public entrance building of the embassy that is connected to and accessed through the park joins the structure while from here the rest of the building spreads out into its own position. This way the functionalistic building aligns perfectly with the functionalistic park design.

5. The two stairs that overcame the height difference between the platform on the north-east side of the park and the rest of the plot are replaced by ramps. The left entrance path is moved more to the left side of the park to make the shortcut through the park faster. This shortcut was created through the years by citizens, as a more logical way to walk thought the park than around it. This elephant path should be kept intact.

6. The Norwegian Hydro did not want public near the building in the original design so at this side there will be a buffer of dense bushes to form a border. These bushes run through behind the embassy so this sheltered place does not become an uncanny place at night. The rest of the park remains accessible lawn to keep the parks open character.

This rational approach towards the adjustments contribute to a better functioning park that attracts people because of its user friendliness. It is accesible and available to all, and contains a certain beauty through its simple and clean layout.

THE DESIGN
Section through park

This section shows how the building is embedded in the park and how it is dealing with existing height differences. The public entrance is facing the pedestrian route that runs through the park and connects the building with the public space. The rest of the building is turning its back to the park so it doesn’t interfere with the tranquil atmosphere, the facade is closed and doesn’t stand out when approaching the building from this side. At the same time the building is in dialogue with the high-rise building of the Norsk hydro and together they are defining the borders of the park.

The building is opening and inviting towards the other side, here the entrance for employees and invitees is situated.
Figure 25: Section through park
The conceptual scheme

As explained in the chapter ‘use of the embassy’ on page 24, the functions that have overlap are merged into spaces with shared functions and users and will form the cores of the embassy. These cores are in the design the kitchen and the consular area. Here, different kinds of users are involved and their paths will cross each other in these cores.

The first image shows how this idea is translated to a scheme that can be used for the layout of the building. The kitchen is situated on the intersection of the embassy and the residence, so the people living in the residence can make use of this kitchen as well as the employees of the embassy can use it as a place to have lunch and relax. The consular area is situated on the intersection between the visitors entrance and the embassy. The consular area is the point where employees and visitors meet to arrange important matters.

The second image shows how to come to the current layout, the kitchen core is drawn out of the embassy building to be able to provide privacy for the residents. This way the kitchen stays a joined space, but can also be closed off. When inviting people over for important dinners the space is open so the cooking equipment of the residence can be used to prepare and serve dinner. In weekends or other moments the ambassador wishes to have more privacy in his residence, the kitchen of the residence is closed off from the rest of the space, and a little counter is left for the employees.

The third image shows the rotation of the intersecting parts. The visitors entrance is turned towards the walking route through the park to connect to the modernistic park layout. The residence is turned so both the embassy and the residence have their facade pointed towards the south. The embassy is turned slightly more towards the East because there is more activity in the morning and the residence slightly towards the West to be able to use the solar heat till later in the day.
Figure 27: Kitchen opened up between embassy and residence

Figure 28: Kitchen closed down between embassy and residence
Figure 29: plan first floor
Figure 31: Section AA’
scale 1:200

Figure 32: Section BB’
scale 1:200
Figure 33: Elevation CC’
scale 1:200

Figure 34: Elevation DD’
scale 1:200
Figure 35: View on embassy from Hydro office building

Figure 36 (left): Perspective view
The entrances on the ground floor of the buildings are situated apart from each other so the different functions are clearly separated. The entrance of the residence leads towards the adjacent road and people using this entrance don’t come near the embassy. On this level the embassy and the residence can be seen as two separate buildings that are turned away from one another. When entering the embassy the tapered space between the buildings leads the user/visitor towards the entrance.

Behind the entrance of the embassy the lobby is situated. From here all parts of the building can be reached. First the secretary desk will be passed, so people that are not employees can register themselves here. Employees can enter the workspace on their right through a security gate. In this workspace workplaces, meeting rooms and the consular area are established. In front of the entrance toilets and a big wardrobe can be found and when taking the stairs on the left side the big kitchen will be entered.

Across the entrance the sanitary facilities are located. A central point in the building, so it is either easy to access from the workspace and from the kitchen space upstairs. At the left side there are a men’s, a women’s and a disabled’s toilet. At the right side users enter a big wardrobe that provides sufficient storage space to store thick winter clothes during harsh weather conditions. Behind this storage space is a small technical space.
The flexible workplaces are set in the middle of the building in the big open space. This way everybody is working together in the same space which is conductive for communication between employees and fades hierarchical orders. There is also an open connection with the consular area, so all colleagues are within easy reach.

The workplaces are raised from the floor to create a boundary between the traffic route and the actual workspace. The space underneath this raised platform is used for air treatment. The facade on the south side is mainly made of glass so there will be enough light penetrating into the workspace.

Underneath the consular area transparent meeting rooms are positioned. These meeting rooms can be used for multiple purposes. There are three rooms with different sizes, smaller meetings can be held in the smaller rooms and big meetings in the big room. The rooms can also be used as quiet workspaces, or for videocalls.

The partition walls are made of glass and are positioned slightly backwards from the edge of the box that penetrates the building on the first floor. This way this box feels like it floats in the workspace.
At the first floor the visitors entrance is connected to the walking route through the park. On this floor there is also a connection between the embassy and the residence. This connection is made when the kitchen of the residence is opened up to the canteen of the embassy to form one big space to host dinner parties and similar events. This is the only place where the functions of the embassy and the residence overlap.

The visitors entrance leads into a waiting space as a portal for the service desk. This area is completely separated from the rest of the embassy, because people that need to arrange stuff at the service desk, like the arrangement of important documents, don’t have anything to do with the other activities going on inside the embassy. From the desk they get a surprising glimpse into the embassy; the open building seen from the inside does not comply with the closed image they get approaching the building from the park side.

The embassy can be entered through a secured door in the waiting room and to enter the consular area employees need to pass a second secured door. The service desk has a standard

The joined kitchen on the first floor connects the embassy with the residence. Because important dinners will be hosted here, privacy is needed. The canteen of the embassy has a big window that offers a nice view towards the park. To ensure privacy of the embassy this window is covered with a perforated brick wall, so people can look outside, but not back in. At the crossing between the two buildings there is also a curtain wall offering a view over the water at the quiet green area behind the building. The wall on the right is a translucent reglit wall, giving the people from the street side a glimpse of the silhouettes inside. Also from the workspace you cannot look inside the canteen, but movement can be perceived. This way the reglit wall forms a boundary.
The entrance hall of the residence is extended over two floors. There is an open relation with the kitchen on the first floor, so actually you enter right in the kitchen of the building. On the ground floor there are the sleeping areas and bathrooms and the living spaces are situated on the first floor.

The left sleeping wing consists out of two bedrooms and a bathroom. One master bedroom for the ambassador and optionally one children's bedroom. Because the bedrooms are on the ground floor extra care should be given to privacy. The bedrooms on the south side have shutters that serve as a shading system, but also provide privacy. The windows on the north side are placed right above the water level, so they have a view over the water, but this water also provides a distance from the window so the incidental people that find themselves at the back of the building cannot directly look inside.

The right sleeping wing is separated from the other sleeping quarters by the hallway. This bedroom can be used for formal and informal guests that are visiting from outside of Oslo. Because of the separation and their own bathroom they will have enough privacy during their stay.
At the first floor of the embassy the kitchen forms the centre. The kitchen forms the connection with the embassy, leads to the front door using the stairs and borders to the living room and the office of the ambassador. When the flexible wall is opened up the canteen of the embassy and the kitchen form one big space, so the two buildings feel as one. When the flexible wall is closed all connections and views towards the embassy are interrupted (except for the window in the ambassadors office) so work and free time can be completely disconnected.

The office of the ambassador is located at the side of the residence that is in front of the embassy. This way, even when working from home, he has a connection with the embassy.

The living room is located at the other end of the residence. Because of the way the buildings are orientated towards each other, this end of the residential building protrudes from the composition. This makes that at all three sides the living room has a view over the surrounding greenery and the embassy building extends beyond the view. Next to the living room is the stairway that leads up to the roof terrace.
IMPRESSIONS
Figure 51: View on consular area from workspace
Figure 52: View on kitchen, connecting embassy and residence
Figure 53: View on kitchen, connecting embassy and residence
Figure 54: Embassy seen from streetside
Figure 55: Look down from consular area
Figure 56: View on residence from workspace
Figure 57: View through kitchen seen from residence
Figure 58: Perforated brick wall
Figure 59: Embedding in park
Figure 60: View from adjacent road
Figure 61 (up): Embedding in park
Figure 62 (right): Embedding in surroundings
Figure 63: View from adjacent road
PASSIVE BUILDING
Passive building

In the M3 course the aesthetics of sustainability were investigated. This part of the research focused on passive building and the findings were processed into an essay. The conclusions of this essay are used in the design of the embassy. This chapter will contain a short summary of the essay to explain the way passive techniques are used in the design.

Essay

Passive building is something of all times. Nowadays passive building is inseparable from sustainability because of the energy saving qualities it brings to buildings. But ages ago the principles of passive building were instinctively followed. People cooperated with their surroundings to create a comfortable shelter. So passive building has emerged out of a certain obviousness in traditional vernacular design. The techniques we use today have originated from these first and traditional ways of building. In an essay on passive design Keith Bothwell describes passive design as follows:

‘Like nature, passive design has an inherent beauty, elegance and rightness born from adopting functional forms and the efficient and frugal use of available materials.’

Again we come across the word beauty. But how does this beauty manifests itself in passive designs? Finding something beautiful obviously is a matter of taste, so to be able to say something about the aesthetics of passive design that is not completely based on subjective factors the following table, created by Williamson, Radford and Bennetts, where different images of sustainable design is introduced. The natural image, the cultural image and the technical image are distinguished.

This table was found in a research paper of Hannelore Christiaens, from the university of Edinburgh, and she defines the different images as follows:

- The basic principle of the natural image is that we should work with and not against nature, because nature knows best.
- The motto of the cultural image is: local culture knows best. Sustainability means protecting and continuing the character of the place.
- ‘Technology can deal with any project at any place’ is the catchphrase of the technical image. Nature is seen in function of human life instead of harmony with it. This architecture should result into efficient people in efficient buildings, and should be universally applicable.

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<table>
<thead>
<tr>
<th>Image</th>
<th>Dominant concerns</th>
<th>Dominant horizon</th>
<th>Symbolism/aesthetics</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural</td>
<td>Environmental place, ecosystems, health, balance</td>
<td>local</td>
<td>‘Touching the earth lightly’ with forms echoing nature</td>
<td>Study local natural systems; emphasize sensitivity and intimacy in relation to nature.</td>
</tr>
<tr>
<td>Cultural</td>
<td>Cultural place, people, genius, body, difference cultural sensitivity</td>
<td>local</td>
<td>Highly contextual with forms, materials and construction methods echoing the local vernacular</td>
<td>Study local culture and building; emphasize local involvement and local expertise.</td>
</tr>
<tr>
<td>Technical</td>
<td>Technologies, global environmental impacts, cost-benefit analysis, risk management</td>
<td>global</td>
<td>Leading edge contemporary international systems</td>
<td>Study science, economies and technology; emphasize transnational expertise.</td>
</tr>
</tbody>
</table>

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46 Christiaens, Hannelore. The images of Sustainable Architecture: a refurbishment case study. (The University of Edinburgh, 2012-2013), 53.
So when looking at these deviations the image of the old vernacular design can be categorized into the natural and the cultural image. It is a combination of both. When looking at passive buildings of today it is clear that this image has changed. The passive methods that have descended from the vernacular architecture of the past are still used but they have been defined into strict rules and regulations that are used when applying them in ‘passive houses’.

In the Netherlands these houses cannot use more than 15 kWh/m²/year on heating to deserve a passive house certificate. Those passive houses cannot avoid also using additional active techniques to help them with all these requirements. So what we have when designing a passive house is a set of carefully drawn design rules where nothing is left to chance and coincidence, everything can be calculated. Optimal shape, floor surface, window surface etc.

This way of building is essentially focused on the surroundings but the question arises if these buildings still feel and look like they are connected to nature in any way. With all the active technologies adapted in the building, it is questionable whether a building like this should even be called passive.

It seems like, if you just follow all the design rules, you have a great performing and sustainable home. But what design freedom is left in a building like this? Ken Yeang, architect and ecologist, states the following in an interview by Keith Bothwell:

‘If you build in the performance well, you almost have to build the diagram ... if you build the diagram then it works, but it is also boring ... so a certain amount of license has to be given for deviations ... to what extent do you allow the variations to affect the performance of the building? It’s a difficult aesthetic decision, and sometimes if you get too rigorous with your performance criteria your client will say, ‘well, you know, you’ve designed just a box for me!’

So from this there is to conclude that the aesthetic of the passive home is a box-like building. Every time a design is made following this design rules, a home that has more or less the same characteristics is created.

To examine this statement of Ken Yeang, 3 images of passive houses, which accurately represent the current image of passive houses in the Netherlands, are compared with 3 images of houses that use these passive methods on their own terms. These buildings are relatively recent examples and all built in the Netherlands, so they are adjusted to the same climate.

Passive houses

The statement of Ken Yeang that was cited before is supported by the examples of these passive houses. They all have the same characteristics. They are built very compact, their façade looks pretty closed and has a big grain size. Everything seems to lie in one surface so the reference to a box seems very understandable. When looking at the three images of sustainability this image doesn’t fit into the natural and the cultural image anymore, but has to be included at the technical image category. These buildings make use of their environment, but only for quantitative purposes. And just as the description of the technical image quoted: This architecture should result into efficient people in efficient buildings, and should be universally applicable. This is exactly the case with these buildings. They only focus on the energetic aspect of sustainability, but they seem to forget that there are more factors that have to be taken into account when addressing sustainability.

Figure 64: Autark I, Maastricht

Figure 65 (Left): Passive houses ‘De Kroeven’, Roosendaal

Figure 66 (right): BuitenHUIS, Bodegraven
Houses that use passive methods

The houses that use passive methods perform a lot more like the ones build in the past. These buildings can be categorized in the category of the natural image. They are connected to nature and cooperate with it instead of making use of it. These houses were of course built on knowledge of passive building, but also on common sense. Every building has thought of their own ways of using these passive methods and those are not based on calculations, this makes every house an individual, customized to the wishes of the people that have built it, causing that they feel immediately more involved and attracted to their home.

On the other hand, do the people that built houses like this consciously choose for less thermal comfort in their home than ‘passive buildings’ provide. On average days the climate inside these buildings will be good, but on cold days when the sun does not shine additional heating is needed to keep a comfortable temperature inside. Or use the ‘old fashion’ way, wear an extra sweater.

But there must be a balance possible between performance and looks. In the Netherlands these projects are still hard to find, but when we cross our Southern border there are some interesting housing projects to discover.
Passive buildings

These examples show that the use of passive building techniques should not have an influence on the design freedom and beauty of these buildings. These buildings are energy efficient, comfortable and visually attractive. All three examples show a totally different expression that is derived out of every building's own concept.

The way these buildings use the passive house techniques differs, but in every example they are serving the building and not the other way around. The building is not designed to serve its passive house features, but these passive techniques ensure the performance of these buildings and are included in the design process so they are designed as a part of the architecture. Just like the way we used to implement passive methods in the architecture in the past, but now with the use of complex technologies to adapt to higher demands.

As Lance Hosey puts it: ‘form affects performance, image influences endurance’.48 These buildings can have both. Good performance and an attractive appearance in which their passive nature is still slightly visible.

So when integrating these passive house techniques into the design process, it is not possible to distract one specific image from this anymore. Actually there seems to be almost as much design freedom as in ‘regular’ buildings. So building houses without using these techniques does not make sense anymore, presuming people build to be sustainable nowadays. This way of using passive techniques is the basis for sustainable building. And also showing again that function and aesthetics do not have to rule each-other out. When using these functional elements in an innovative and creative way they can go hand in hand with the aesthetics of the building, giving it its own character and identity.

This way of integrating passive techniques in the basis of the design is used in the design of the embassy. The specific northern climate and vernacular techniques will be studied to create a passive building that is based on its own context. Vernacular buildings in most parts of the world often reflect the knowledge of a climate. And because of the challenging climate in Norway, it seems useful to investigate Norwegian vernacular design, to find out how they battled against this extreme climate through history.
**Scandinavian climate**

The climate in Oslo is, due to its northern position, much colder than in the Netherlands with an average temperature of 16.4°C in July and -4.3°C in January.\(^{49}\) When designing a building isolation and heating play an (even) greater role. When aiming for an indoor climate of approximately 21°C heating is almost always necessary.

When making use of solar heating the extreme differences in day length throughout the year must be taken into account. The sun path diagram shows that on December 21 the sun sets at 09.18 and dawns at 15.12 and at its highest point has a solar angle of 13°. So the shortest day only has 6 hours of sunlight that penetrates deep into the building. On June 21 the sun sets at 03.54 and dawns at 22.44 and has a solar angle of 53° at its highest point. So the longest day has as much as 19 hours of sunlight.


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**Figure 73: Sun path diagram**
Position building

The embassy and the residence are oriented towards the south but both slightly in a different direction. The embassy will be used most in the morning and the afternoon, whilst the residence will be mostly occupied in the afternoon and the evening. That is why the embassy is tilted a little bit to the east, where the sun sets, and the residence is tilted towards the west, where the sun downs. They both have the biggest part of their window surface on the south side to make use of the solar heat whenever it is possible.

Their façade structure also differs. To carry out the mediating function between Norway and the Netherlands their material expression represents these two countries. The central part of the embassy, that houses the Dutch diplomatic, will be built in Dutch brick. The residence and the public entrance, the parts that merge together with the embassy, will be made from Norwegian wood.
Norwegian wood culture

In an essay of Paul Oliver about vernacular architecture in Norway the main building principles of the Norwegian wood culture are explained:

Norwegian landscape is covered in woodland. The Norwegians built well-crafted wooden structures for 800 years, and they developed buildings that were suitable for their activities. The use of similar structures for such a long time was dictated by Norway’s agriculture way of life and the environment. Norway’s traditional architecture is represented by two groups of wooden buildings: farms and stave churches. There was two technical methods used by the Norwegian builders; the log and stave construction.

Norway’s restricted economy up until the seventeenth century made it harder to import building materials other than wood. Wood was plentiful, although the labour required preparing it, transporting it, and shaping it was not. Tough conditions forced the culture to collect a lot of knowledge about their native material. The topology also resulted in comprehensive climatic conditions, which had significant consequences for its building patterns. That Norway is located in north Europe leads to short summer and long winter seasons. The winter could last up to nine months some places; this meant that there were no second chances if one did not pay attention to the elements. It was nearly a life-and-death battle between man and nature in some parts of Norway. Norwegian craftsmen had a precise awareness of the performance and weathering of the wood. The two building techniques; stave and log construction, have been modified for several building types from culture to culture for a long period of time. In stave construction the builders used vertical planks to make the walls. It was originally fixed to the ground with no supporting frame. They were later raised and positioned on foundation beams. The logs that were notched at the corners were used for log construction, and were horizontally stacked on top of each another. Log construction is a quite simple building technique: one log stacked horizontally on top of another offers a robust wall and a solid connection at the corners. The integration of the log technique allowed for tighter and more compact structures.50

This log structure was for that time the most compact they were able to build and by using logs the thickness of the wood was for that time the best protection against the harsh weather conditions. For now this way of building would not succeed in meeting the necessary comfort levels because of unavoidable slits in the structure. Additional isolation would be needed. So to express this vernacular technique of the northern wood culture the stacking of wood is only shown at the external façade of the building to be able to use a timber frame with a thick layer of isolation on the inside. By using elliptically shaped wooden planks, that are referring to the round logs, which are stacked at the corners on the façade the appearance of the log houses is referred to in the wall cladding.(see image X)

When looking at the image of the log structured house it can be notices that there are no windows in the façade. This is to reduce thermal losses that are caused by windows on cold days. This makes sense in a climate like the Norwegians, but on the days that there is sunshine this could be used to heat up the building through openings in the façade. By using louvres in the façade of the residence both situations are possible. On cold days and in the nights the louvres can be shut, so the wood panels on the façade are uninterrupted and when the sun is shining the louvres can be opened to let the light and the heat into the building.
Figure 78: Section through residence, scale 1:50
The entire residence is constructed in pine wood carpentry, except for the floor of the kitchen, which is a concrete wide slab floor. This floor is drawn into the residence from the embassy, so the material from the embassy is extended. Everywhere a thick insulation layer is applied to increase the buildings passive qualities. Big windows are placed on the south facade and some smaller windows to provide light and views on the park and embassy on the other sides.

The pine wood elements on the facade are drawn over the roof and turn into a railing and then into the floor covering of the roof terrace. Seen from the higher surrounding buildings the building looks like a solid wooden box, especially when the lamella are closed.

The lamella system is produced by lenco, and the elements are 190x35 mm, the same size and material as the rest of the facade cladding.

Additional heating and (sporadic) cooling of the residence will be done through low temperature wall heating. This way a comfortable indoor climate will be created that saves 15% on heating costs and energy. The heating elements are integrated in the slab that is covering the wooden structure.
Timber frame for balustrade 220 mm
Scandinavian redwood flooring 35 mm
Pinewood struts 25 mm
Pinewood rails 25 mm
Double layer EPDM sheet
Foamglass insulation 100 mm
Condensation-inhibiting PE foil
Wooden floor beams 230 mm
Wooden ceiling 20 mm
Timber frame for balustrade 220 mm
Scandinavian redwood flooring 35 mm
Pinewood struts 25 mm
Pinewood rails 25 mm
Double layer EPDM sheet
Foamglass insulation 100 mm
Condensation-inhibiting PE foil
Wooden floor beams 230 mm
Wooden ceiling 20 mm
Dutch brick culture

Brick is a typical Dutch material. And the Dutch were the only ones to use this material next to concrete, glass and steel during the functionalistic movement. The main raw material that is used for production of bricks is clay, so because of the availability of many different sorts of clay in the Netherlands the use of this building material is obvious.\(^{51}\)

It were the Romans that first introduced bricks into the Netherlands, shortly after the beginning of the era. After the fall of the Roman empire this building material disappeared again until the monastic orders came to the Netherlands in the twelfth century and reintroduced it. The application of brick gets a big impulse when the use of wood in medieval towns becomes prohibited because of fire risks. Due to a lack of natural stone, brick becomes a commonly used material for the Dutch. In 1950, again an impulse was given to the brick industry that was related to the reconstruction after the second world war. The Dutch brick industry was in that time concentrated in areas where big rivers were situated, in Groningen and parts of Brabant, where the best clay in big supplies was found.\(^{52}\)

Brick is used for the central part of the embassy as a typical Dutch material. Seen from the park, this part of the building has a massive, fortress like appearance with small windows and plants growing from the roof.

\(^{51}\) *Van klei tot baksteen en meer.* Velp: Koninklijk Verbond van Nederlandse Baksteenfabrikanten(KNB), 2007.


Figure 81: Dutch fortress
Figure 82: Section through embassy, scale 1:50
The embassy is constructed with prefab concrete walls and concrete floors. The exterior is finished with brick. The first floor runs through into the residence and is a wide slab floor. The ground floor and the roof are hollow core slabs.

The building has green roofing with relatively big plants that grow over the roof edge. This gives the building camouflage on the park side and gives a nice view from the roof top terrace on the residence.

The park side of the building has a closed facade that only has one opening. The brick runs over the opening, but is perforated at this place. This way from the inside a clear view on the park is possible. From the outside the wall looks like a solid plane, until a closer look is taken.

The window frame is hidden behind the brick and opens towards the inside so the brick openings and the window can be cleaned. On the inside the windowsill is finished with a thin layer of white, powder coated aluminium in the same colour as the window frame. At the top of the perforated part of the brick wall Hakron masonry supports are used to relieve the perforated brick wall of the weight of the upper part of the brick wall.
CONCLUSION
Conclusion

*How can a Dutch embassy in Oslo serve as a mediating element on different levels?*

The goal of this design was to extend the mediating function of the embassy in service of the city of Oslo, in return for their hospitality. The design of the new embassy building mediates between elements on different scale levels. The different levels to which the design is playing a mediator are: the country level, the city level, the park level and the building level. On these levels is mediated between different factors that connect the building to the city, interweaving the embassy into the urban fabric.

**The country level – Mediating between the Netherlands and Norway.**
The main function of the embassy is to conduct diplomacy between the Netherlands and Norway, so on country level the ambassador and the other employees of the embassy are the mediating/diplomatic element.

**The city level – Mediating between Hydroparken and the City of Oslo.**
The task at this level is to mediate between the functionalistic park design of Norwegian park architect Morten Grindaker and the city and its residents. The design of 1960 was not positively received by all citizens of Oslo and can benefit from some adjustments. By deliberately reconsidering the existing elements and adjusting them, or adding new elements where needed to the current design of hydroparken, it becomes a more functioning and attractive park, handling the old design with respect. The adjustments give the park a higher value as a part of the city.

**The park level – Mediating between the public park and the ‘private’ embassy.**
Water mediates between building and park. The pond that is kept alive from Morten Grindakers design for the park has been moved to serve as a safety buffer between the public space and the embassy building. The vulnerable position of an important building like an embassy in the middle of a public place requires intervention. By using water as a partition the peace and tranquility of the park is kept and is even attracting people deeper into the park, because water attracts. By flooding the area around the embassy like an inundation strip, a kind of fortress-like status is given to the embassy. This way the water mediates between the park and city through its attractive characteristics, and between the park and the building by forming a buffer and involving the building in the composition of the park.

**The building level – Mediating between the different users.**
The layout of the building is mediating between the different users by letting spaces merge and giving them multiple functions, making it a pragmatic and functionalistic design. Mediating between the values of the Dutch and the Norwegian functionalism.

With its layout the building also mediates between the different kinds of users that experience the building. The building is mediating between the Dutch and the Norwegians collective mentality by responding to their common grounds and letting the qualities of openness and pragmatic play an important role, to make this building an attractive place for people of both countries.
Reflection

After finishing the M3 project, I did not have a clear view on the angle I wanted to take for the design of the embassy. It wasn’t easy to get started with the project and take a clear approach because of the complexity of the notion ‘Dutch Identity’ and the absence of a clear definition. Therefore it was difficult to find a starting point for the design. This caused that in the beginning it was hard to stay motivated and keep searching for a direction.

After going to the lecture of Herman Pleij and reading his book, I got rid of the notion ‘Dutch identity’ and replaced it with 'Dutch collective mentality'. By doing research on collective mentality instead of identity I could understand how a group of individuals can be summarized under one denominator that is the ‘Dutch collective mentality’. With these findings I started with the composing of the programme of the building and from there I had a starting point for the design.

What was also an interesting part of the assignment is the way to threat the boundary between public and private. Not only for the embassy and its surroundings, but also the way in which the embassy and the residence of the ambassador act upon each other. On the one hand the mandate in which the ambassador is assigned is very intensive and a big amount of time is spent in the embassy. The integration of the residence and the embassy is therefore interesting, also a bit at home when he is at work and a bit at work when he is at home. But on the other hand there is the potential family of the ambassador. They need their own privacy and have less to do with the embassy. Thus an interesting design challenge.

With the long timespan of almost a year in which the project lasted there where alternating periods of hard and intensive work but also periods in which it was hard to keep myself motivated and work on the project the whole week. In the end I think this is almost inevitable and I think I succeeded in creating a nice result. A functional building that deserves his spot in the city by mediating between itself and its surroundings, that speaks to the Dutch and the Norwegian with their functionalistic history and their pragmatic mentality.
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Tables
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