To understand a building in all its aspects and contexts, an analysis is an important start for the graduation studio 'Mixed Projects The Hague'.

In the first part, an analysis of The Hague is done, focusing on the different characteristics of the neighborhood around the Raamweg. To be able to get a hold on this immense topic, I decided to look more into the green structures that dominated the public space. The emphasis lies on the visual perception.

For the architectural analysis, I chose to study on the building of the Octrooi Raad. Firstly because of its unique location on the edge of the residential Benoordenhout, the stately Benoordenhoutweg and the Hague Bos. Since the building is recently for sale and will be auctioned in 2014, the building is a very topical subject. Another thing that attracted me was the composition of the volumes and shapes.

When we look into detail to the building and its facades, sections and plans, we can discover a lot of information about the building technology. The last chapter of this booklet describes the materials, the structure of the facade, the construction and the climate design of the Octrooi Raad building.

After each chapter, a short conclusion and value assessment are attached. In the value assessment, I describe the points that were most important, either in a good or a bad way. They are organized by scale and by value, varying from very valuable to indifferent. These values will be the handholds and starting points for the design phase.

**REPORT P1 - INTRODUCTION**

**RESEARCH QUESTIONS**

**URBAN ANALYSIS - THE HAGUE**

What are the characteristics of the neighborhoods around the Raamweg in The Hague?

What are the characteristics of the public space?

What are the dominant green structures?

- lines
- surfaces
- volumes

Where in the Benoordenhout can we find these green structures?

What characteristics can we link to these different structures?

Which of these characteristics can we find back around the Willem Witsenplein?

**ARCHITECTURAL ANALYSIS - BUILDING OCTROOI RAAD**

What was the development of the building in its historical context?

What are the specific characteristics of the volume that cause this 'blending in' and 'standing out'?

What have been the most important changes to the building?

**ANALYSIS BUILDING TECHNOLOGY - BUILDING OCTROOI RAAD**

What have been the most important changes to the building?

With these interventions, what have been the changes in the construction?

What materials have been used in the building and the transformations?

What is the dominant order in the facade and what are the changes?

What have been the changes in the climate design of the Octrooi Raad building?

**Conclusion & value assessment**

**Conclusion**

**Value assessment**

**Literature**

**First sketch**
What are the characteristics of the public space?

What are the dominant green structures?

For the assignment of the RMIT studio ‘Mixed Projects’, the city of The Hague with its interesting scala of vacant office buildings was chosen as setting, and is therefore the subject of the urban analysis. As a city is the result of countless layers of urban fabric, I needed a more specific focus point and approach for this brief analysis. By looking at one particular layer of the city, your vision will be limited in a way, but it offers on the other hand a way to comprehend the city without getting lost in all its complexities. As I walked through The Hague in autumn, one of the things that struck me was the diversity in trees, parks, fields and gardens. In one neighborhood, the visible green is no more than a subtle line of trees, in another area the lush green estates and parks dominate the character of the city.

As Kevin Lynch describes in his ‘The image of the city’, we understand the structure of the city by making a mental map with 5 different elements: nodes, edges, districts, paths and landmarks. I think that green structures, like lanes with big trees, or a big open field, are a very important link in that ‘mental map’. Depending on their scale, they provide in the 5 elements that Lynch describes. But as the theory of Lynch uses the whole city structure, I decided that this global theory was not ideal to analyze the specific green structure of The Hague with. How would I categorize my own perception? Looking at the city of The Hague and the different neighborhoods I discovered that there are a few dominant types of green, like the lane, the sportsfield, the estate. As they all have a different history, function and shape, I decided to focus purely on the visual perception, an abstract interpretation of the green. The different green structures were dominant in either one, two or three dimensions: a line, a surface, a volume. Broad lanes were emphasized in their length by strict lines of trees. The contrast between high density areas and open spaces is defined by green fields. The estates and parks form stately, green volumes, like around Clingendael. A dominant green structure, in this urban context, can be defined as (a group of) trees, bushes, plants, grass, that is in that area visually dominant for the public space. For example, in a street, there can be a strip of grass with large trees. The trees define the image of the public street and are therefore the dominant structure. This is in a way also dependent on the time of the year: in autumn and winter, trees are less dominant since they don’t carry leaves.

This very systematic and clear way of visual analysis can be found back in the work of Dom Hans van der Laan, who defined architecture as the art of proportioning three different dimensions: the beam, the plane and the block. When we call something a beam or a block depends on the proportions between height, width and depth. As I will use the literature and theories of Hans van der Laan as an tool during the redesign, I decided to use his approach in the analysis of the public green structures in The Hague. (Van der Laan Foundation, 2013)

For the urban and architectural analysis, an area from the Central Station to the Scheveningse bosjes is designated. It includes the strip around the Koningskade/Raamweg and the city center. This zone incorporates three city districts (Centrum, Haagse hout, Scheveningen) and nine of The Hague’s neighborhoods:

- A. Westbroekpark
- B. Benoordenhout
- C. Haagsebos
- D. Bezuidenhout
- E. Stationsbuurt
- F. Centrum
- G. Willemspark
- H. Archipelbuurt
- I. Scheveningse bosjes

The image right shows the map of the analyzed part of The Hague with the districts and dominant structures.
In a city, the most common green structure are (lines) of trees. They often go together with a road or water, emphasizing their direction. They function as street furniture, embellishment of the street and as a natural umbrella or sunshading. The trees are in most cases the dominant structure, although this changes with the seasons and is depending on the scale and proportion between the different structures in the public street.

In his master thesis, Van Merrienboer dedicates a chapter on the esthetical role of green in cities. He sums up several studies that all confirm what we already empirically know: we prefer streets with trees above streets without any green. (Van Merrienboer, 2011)

In the neighborhoods around the Raamweg, one of the most common dominant structures are the lines. A lot of lanes are edged with trees, sometimes with more than one row. Within this structure, we can define several ways of using trees.

On the Raamweg and along big roads such as de Benoordenhoutseweg, large trees follow the course of the road and play an important role in the perspective and perception of the public space. The roads are often overarched with branches and give shelter, but also cause a lot of shadow. The trees and greenery around the Raamweg are a valuable part of the Hague ecosystem. Birds nest there and also use it as an important ‘landmark’ (Gemeente Den Haag, 2003).

An opposite approach of using green lines in the public space, are the small trees surrounding the little streets in the Archipelbuurt en Benoordenhout. The trees still work well with the perspective, but can now be named as part of the street furniture. Their main use is decoration and improving the area.

Trees are not the only way to create a green line in the orthogonal urban pattern. In the Benoordenhout for example, most of the streets are characterized by a sequence of small gardens in front of the housing blocks. Each front garden is furnished differently, but overall we perceive the edges of the street as a green line. This type of the front garden is very typical for the dutch row housing in the big cities, where the small space between the front door and the sidewalk shows itself as a small green volume. All these volumes linked together eventually form a line along the street. This course depends on the seasons, the uniformity and the effort of their owners.

A third way lines are used is in the area of the Westbroekpark, where the trees are placed along a meandering road. Here, they do not emphasize the orthogonal grid of the city streets, but are used in a playful curved line together with the separate housing blocks and hilly landscape of the dunes.

In the center of The Hague, tree lanes are less common, but here often combined with the old canals (Hooikade) or around a square (Het Plein). Around the Binnenhof, the large trees surround the water, although their size also insinuates perhaps more of a volume than a line. The same can be said about the Lange Voorhout, where the lane of trees evolves into a roof of leaves around the corner. The linearity loses importance, the surface or volume becomes more dominant.
The second structure in the analysis is the surface. This can be a large field, like the Malieveld, or a strip of grass in a neighborhood. In the area of the Raamweg, we can see several public and semi-public surfaces. These surfaces are not dominant because of their extensive greenery, but more for their open space. The Malieveld for example stands out because it is a large open field in between the building blocks. It was originally part of the Haagse bos, but deforested during the war and later on used as sport field for malie, a game that resembles cricket, and gives the Malieveld its name. Nowadays, the Malieveld is used for events, demonstrations, sports and so on.

The long history of the Malieveld has a strong link with the development of the city of The Hague. Therefore, I think that this particular field is the most important and dominating green structure in The Hague. Its location close to the center and the central station gives every citizen, tourist and passerby a very clear orientation on the city. Not only the field itself, but even more so the view on the surrounding buildings, made possible only by this broad open field. This is unique since in the city, you usually have a limited view. But the other way around, the field is not visible when you are between buildings. Together with the Koningstunnel field (below), it is and should stay an important meeting and orientation point.

If we compare the Malieveld with the Mekelpark in Delft, as shown in the image on the right, we can see that the Malieveld covers by far a larger surface (red line). The Mekelpark is about the same length as the short end of the Haagse bos (dotted line). However, in my experience, the Mekelpark seems a lot longer than the walk I made a few times from the trainstation towards the Raamweg along the Koningstunnel and Malieveld. This is probably due to the very linear form and the nearness of high buildings on the campus in Delft.

Besides the well-known Malieveld, there are several sportsfields and grass strips spread around the city of The Hague. In the designated zone, the clearest one is the large strip of grass around the entrance of the Koningstunnel. This open space is in a way the first green structure of the sequence towards the coast. On this field, a large tree gives shelter and breaks the openness of the field. The open space contrasts with the highrise of the city-center (image below).
The third structure is defined as the volume. This includes parks, forests, bushes that form a volume, something that ‘blocks’ the sight. In the chosen area, there are two very large volumes. The first is the Haagse bos and Koekamp, that form a long rectangular volume from the Raamweg towards Wassenaar. The other is the Scheveningse bosjes-area, with very diverse greenery north of the Hubertus-viaduct.

Besides these two dominant volumes, there are a few other volumes to be named in The Hague. This includes all the estates, since they are closed off from the public realm by trees and bushes and in that way also form a volume. And in a way, the Lange Voorhout in the center can also be seen as a volume, since the trees are very big. Together they form, besides a linear element, a volume, and in summer, a canopy of leaves.

Comparing a few of these green volumes will help us understand their size. The Scheveningse bosjes/Westbroekpark are about the same size as the Delftse hout. Although very different in their appearance, both areas cover a good 750 to 1000 ha and are very suitable for recreational purpose. The big difference is their location: the Delftse hout is situated on the edge of the city of Delft, and is only accessible by bike or foot. The Scheveningse bosjes are crossed and divided by the Hubertus-viaduct and Raamweg, two very busy roads. As described in the vision of the municipality, the Scheveningse bosjes and Westbroekpark have to be connected to be able to function as ‘the green heart of The Hague’.

For the Haagse bos, a comparison with the Amsterdamse bos is made. The length of the water of the rowing course, surrounded by a big park, is 2km, an easy measure. As shown in the picture on the right, the Haagse bos (with the Malieveld) is almost as long as the rowing course in Amsterdam (dotted red line). This gives me a clear view of the actual size of the Haagse Bos, since I am very familiar with the park in Amsterdam. The Haagse Bos however is more dense and one volume.

Another park we can compare it with is Central Park in New York, which has almost exactly the same shape. It is about 1.5 the size of the Haagse Bos. Whereas the Haagse Bos is surrounded mainly by building blocks of about 5 levels, the contrast in New York is much bigger. The highrise abruptly stops and Central Park is a ‘gap’ in the urban profile. In The Hague, the forest is about the same height as the direct surroundings and is therefore more likely to be seen as a volume, especially since its edges are very densely overgrown.

This type of green, the volume, probably has the most diverse appearance and size. Whereas the Haagse Bos is an immense, 2km long volume, there are also much smaller volumes to be found in the different neighborhoods. In the Benoordenhout for example, a lot of streets have a front yard. Depending on its owner, vegetation and the season, these can also be seen as a green volume from the street.

CONCLUSION

The Hague is characterized by a broad range of green structures. Although they play an important role in the ‘mental map’ as Kevin Lynch describes, I decided to categorize them differently. The three structures that were most common in my perception are the line, the surface and the volume. Of course, there are always exceptions, but in the area around the Raamweg, we can find a few very good examples of these three different dimensions. The lines are visible in the streets of most of the neighborhoods, where trees emphasize the direction of the street grid. In the Benoordenhout, this also happens with the repeating front gardens. A perfect example of a surface is the Malieveld. And the Haagse Bos is a very dense green structure, showing itself towards the public space as a volume.

A final note is that the perception of green is depending on a few things. The seasons can change the appearance of a structure drastically. Also, the surrounding urban structure is important. Do they make a big contrast or are the buildings and green scalewise comparable? And since no perception is purely objective, the purpose of the observer is also playing an important role.
Where in the Benoordenhout can we find these green structures?
What characteristics can we link to these different structures?

GREEN STRUCTURES	WHERE
LINES	- broad lanes, streets, traffic
SURFACES	- sports fields, parks
VOLUMES	- parks, estates and forests
GARDENS	- small scale streets, row housing

CHARACTERISTICS
MONUMENTAL	Lines
LEISURE	Surfaces
NATURE	Volumes
RESIDENTIAL	Gardens

Which of these characteristics can we find back around the Willem Witsenplein?

RESIDENTIAL
Benoordenhout: a green urban neighborhood with 1930’s row housing, small streets

NATURE
Haagse Bos: a large forest stretching from The Hague’s city center to Wassenaar

MONUMENTAL
Benoordenhoutseweg: a sequence of iconic buildings along a broad green lane

Value assessment

on the intersection point of residential, monumental and nature

well-balanced composition of building mass

interventions are part of the building history and added a new dimension

strong visual connection with Haagse Bos

bus traffic blocks physical connection to Haagse Bos

REPORT P1 - BUILDING OCTROOIRAAD - HISTORY

What was the development of the building in its historical context?

The building of the Octrooiraad on the Willem Witsenplein has changed several times in history: morphological, but also in use, context, interior. By quickly investigating these different features of its 80 years life span, we can place and understand the building in a historical context.

Facts
Name: Octrooiraad  
Address: Willem Witsenplein 6, The Hague  
Construction date: 1931-1933
Architect: J.G. Robbers  
Supervisor: C.G. Bremer  
Style: Nieuwe Haagse Stijl  
Surface plot: ca. 5.358m²

Octrooiraad
The Octrooiraad, the Dutch patent office, started in 1893 as the Bureau voor de Industriële Eigendom, and the Octrooiraad, the Dutch patent office, started in 1893 as the Bureau voor de Industriële Eigendom, and the Octrooiraad, the Dutch patent office, started in 1893 as the Bureau voor de Industriële Eigendom, and the

Architect
The Rijksgebouwendienst was at that time led by Rijksbouwmeester C.G. Bremer, whose work can still be found on several places in The Hague. For the design of the office for the Octrooiraad, the Rijksarchitect J.G. Robbers was appointed, although several sources state that his work was supervised by Bremer. Cornelis Bremer (1880-1949) designed various offices in The Hague, one of his designs that has resemblance with the office of the Octrooiraad is the building of the PTT in Zaandam (1929). The rounded corner elements and stepped roof edge can be found back in the office of the Octrooiraad. However, the strong horizontality is absent, and the windows of the PTT office in Zaandam have a clear vertical accent.

J.G.Robbers worked as Rijksarchitect for the biggest part of his career and his style is developing clearly. His work was supervised by Bremer. Although very different in style, typology and material, the PTT office Zaandam has resemblance with the current building of the Octrooiraad, the board chose for a cheap plot on the edge of The Hague, instead of an expensive location in the city center (Blaupot ten Cate, 1933). The execution of the construction was done for a very low price, as several articles from 1933 state, and praise.

Users
In the first 40 years of its life span, the building was used by the Octrooiraad. Besides the large amount of offices and archive space, the building housed a library, restaurant and post office.

As the Octrooiraad became bigger, the building needed to adapt to the new requirements. In 1939-1940 and in 1955-1959, the building was transformed to create extra office space.

After the Octrooiraad moved to a new European headquarters in Rijswijk, the building became vacant for a few years. After a renovation in the late seventies, a part of the Ministry of VROM occupied the building for a few decades. In 2003, the Ministry of LNV moved its department of Agriculture temporarily to the Willem Witsenplein, due to renovation works in its main building. In 2010, the building became vacant again, and the government appointed the organisation of Zwerfkei to rent out the offices to individuals with small businesses to prevent squatting and to cover the maintenance costs. The government recently decided to gradually repel unused governmental office buildings, including the building on the Willem Witsenplein. In October 2013, the building was announced for sale, and will be auctioned in May 2014.

Urban context
The plot was located in the new neighborhood of the Benoordenhout, by the design of H.P. Berlage. At that time, the Nieuwe Haagse Stijl dominated the architecture in The Hague. This style, a variation on the traditionalism, is characterized by the use of brick, horizontal accents and urban coherence. The rectangular, cubic influences from De Stijl are clearly recognizable.
Next to the plot, the - in that time - infamous Nirwana-flat had already been constructed, a design of Jan Duiker. Although different in style, typology and material, this urban villa shows the same horizontality as the neighborhood. (Watjies, 1934)

As described in the previous chapter, the building is situated on the edge of three characteristics: monumental, residential and nature. The building connects on the northwest side to the residential character, with its wings that mesh with the neighborhood. On the Willem Witsenplein on the other hand, the architect makes a monumental statement by creating a more complex composition on the corner, and at the same time links the building visually with the Haagse Bos.

Finances
As the office was financed by the incomes of the Octrooiraad, the board chose for a cheap plot on the edge of The Hague, instead of an expensive location in the city center (Blaupot ten Cate, 1933). The execution of the construction was done for a very low price, as several articles from 1933 state, and praise.

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As described in the previous chapter, the building of the Octrooiraad has two faces. On the northwest side, it blends in well with the lowrise of the dwellings, but on the Willem Witsenplein the building profiles itself as a monument. What are the specific characteristics of the volume that cause this 'blending in' and 'standing out'?

The first sketch shows the the borders of the urban block, following the alignments of the surrounding dwellings. The height of the building is determined both by the surroundings as by the spatial demand of the Octrooiraad: the only way to fit in the specified amount of offices and ensure enough daylight, the volume had to be divided into separate aisles and have a minimum of 4 floors (including the souterrain).

The second drawing is a crucial point in the design: here, the architect defines the bigscale corner on the Willem Witsenplein, as well as the wings towards the neighborhood, that are of the same width as the rowhousing. The block now has the shape of the letter E.

Looking at the floorplan, the E-shaped volume is adapted in some corners to respond to the entrances and staircases. Also, the roof edge is defined by adding a second line that is slightly recessed. This forms the primary volume.

Two secondary volumes are added to the composition, one at the main entrance and one at the west entrance, that are about 1m higher than the primary volume and therefore emphasize the importance of the entrances.

A third level of shapes is added, including the towers next to the middle wing (A), the entrance volumes on the head of the wings (B), the highest volume above the main entrance (C), and the semicircular staircase on the van Alkemadelaan (D). The last two mentioned additions express even more so the monumentality of the corner on the Willem Witsenplein, whereas the entrances on the Weissenbruchstraat connect to the smaller scale.

To connect the massive composition to its surroundings and the human scale, some additional elements are designed. The entrances are equipped with a canopy and staircases leading towards the door. The canopy above the main entrance follows the particular shape of the corner on the Willem Witsenplein with its cylindrical staircase. The entrance block is provided with two beams, highlighting the verticality of the monumental corner. Finally, the brickwork fence around the whole helps to make the building tangible for its user, also roughly following the outline of the composition.
As the Octrooiraad was in need of more office space in the late thirties, the building changed in shape as the west wing was added. Also this building part was based on the same width of the adjoining rowhousing and blended in very well.

Another intervention took place in the mid fifties, when the Octrooiraad asked for the addition of two more floors. With this transformation, the order in the volumes changed significantly. The architect created a new dimension in the composition: a new primary volume was born out of the recessed part of the original. All the other volumes were now made submissive to this main volume. More information about these changes can be found on the right.

Besides this mass study, one very dominant element of the building is the horizontality in the facade. This is described more in detail in the chapter ‘facade’.

The building mass is thus both connecting with the urban context on a big scale as well as the user and surroundings on a human scale. By adding minor volumes and elements, the massiveness of the office is relativized.

Transformations
1939/40: addition west wing
1954: pump house and changes courtyard
1955/58: addition two floors
1973: fire escapes
1980: replacement windows Alkem adelaan and Willem Witsenplein
1992: asbestos removal and changes interior

What have been the most important changes to the building?

As described in the previous page, the building has known two big transformations, one in 1940 and one in the late 1950’s. Looking at these changes more in-depth, we can discover and investigate a lot of characteristics of the building, in the morphology but also on a more detailed scale: the use of material, the construction, the facade and the climate design. On this page, the morphological changes are shown. The next pages will describe these changes in more detail, on pages 11-15 the technological aspects of these changes will be discussed.
1939-1940: addition of west wing

The Octrooiraad was in need of extra office space, and assigned the Rijksgebouwendienst with the transformation task. J.G. Robbers was in charge of the design and decided to place the new offices in a new wing on the Roelofstraat.

In this west wing, another 35 offices were placed on the souterrain up to the 2nd floor. On the top floor, a meeting room and large balcony were situated.

The original entrance was demolished, along with a part of the facade. A new entrance was designed between the old and the new, in the exact same architectural language, with the canopy, stairs out of natural stone and monumental wooden door.

The construction structure, horizontal division in the facade and material was copied into the new part. Different from the original building is the lower first floor, breaking with the horizontal lines and decreasing the height of the building towards the rowhousing on the Roelofstraat.

1955-1959: addition two extra floors

After the WWII, the organisation of the Octrooiraad grew even more and again needed more office space. From 1955 to 1959 the building was extended with two extra floors.

The wooden roof construction and the facade of the top floor, housing the installations, was demolished. In the original plans, this expansion was already foreseen, since the roof construction was carried out in a way that was easy to deconstruct.

The 3rd floor was simply added on top of the original, except for the middle wing, where the facade jumps back a meter. This recession of the facade is carried out for the rest of the building on the 4th floor, creating a narrow balcony around the entire building. The facade of the 4th floor connects in that way with the recessed part of the main volume, changing the order of the composition in a very clever way, still respecting the original. The recessed top floor also decreases the massiveness of the volume, as the passer-by only sees the lower floors. The whole mass of the building is only visible from a distance. Although the building increases in height by 1,5 floor, the intervention still respects the design values of the architect towards the surroundings.

At the corner facing the Willem Witsenplein, the changes are the biggest, visible in the sketches on the right. The verticality of the corner block is strongly enhanced since the ratio height/width changes more radically than the rest of the wings. A second change is the connection between the cylindrical tower and the main volume, as the added part of the facade is now of the same height. Where the round shape was first slightly higher, it now blends in with the main block. Its importance decreases, but the overall coherence of the structure is made stronger, in my opinion.

The office of the Octrooiraad is built in the neighborhood of the Benoordenhout, that is characterized by a strong urban coherence expressed in horizontal accents, cubicustic shapes and traditional material use. The building has two sides: the monumental, big scale corner on the Willem Witsenplein, and on the north west side a division in different wings, connecting to the small scale of the surrounding rowhousing.

For the composition to connect with its urban context and the human scale, the architect made use of smaller elements, such as the canopies, stairs and fences. The windows play an important role in the direction of the facade, this will be explained more on page 13.

With these changes, the buildings characteristics and composition changed. The emphasis moved from the horizontality towards the vertical accent of the corner block. The rounded staircase on the van Alkemadelaan fused with the main volume as the extra floors were added.

Although the interventions have been carried out with great respect towards the original design values, some of the characteristics have been lost. The connection with the height of the surroundings diminished, in spite of the stepped roof edge.

Value assessment

on the intersection point of residential, monumental and nature

well-balanced composition of building mass

interventions are part of the building history and added a new dimension

round tower became part of main volume instead of separate shape

strong visual connection with Haagse Bos

busy traffic blocks physical connection to Hague Bos

CITY

BUILDING

INDIFFERENT VALUABLE
What have been the most important changes to the building?
With these interventions, what have been the changes in the construction?

The building original construction system consists of concrete columns, a double row forming a corridor in the middle of the building aisles, and a row in the facade. The concrete beams, perpendicular to the facade, and floors are cast in situ.

The building is founded on a concrete sill plate, directly forming the floor of the basement. Concrete basement walls have been cast, on top of this the natural stone is placed that forms the visual base of the building.

The construction is well connected with the material use on the facade: the horizontal elements, the covered floor slabs, are revealing the height of the floors. In the vertical beams between the windows, the structure of the columns can be recognized.

The strict grid of the construction has proved its power in the past: with the orthogonal, repeating structure, it is very easy to place and remove separating walls, in order to enlarge or combine offices. The structure has the disadvantage that the function and interior is restricted to these measurements and the placement of the columns.

The brickwork facade is selfbearing and on most places 4 headers thick. The concrete floor slabs run through the facade and carry together with the beams the overhead structure. The facade therefore bears only one floor each time.

In the new west wing, the same construction method is used, although the total width is a bit smaller and the columns can therefore be more slender. The later added top floors have a different facade and construction scheme. The third floor is still carried out in the same way as the lower levels, but with the top floor facade recessing, the walls are made thinner. Also, since the distance between the columns is decreased and the columns are only bearing the roof, they are slimmer than on the lower levels. This is visualized in the section on the right, with the line of demolition just above the third floor level. The construction drawings found in the archive of The Hague show the exact location of demolition and added floors.
What materials have been used in the building and the transformations?

The facade of the building shows a strict order in the horizontality, the pattern in the windows and the use of material. Looking at a fragment from the facade on the Roelofstraat (right), we can find the different materials and the way they are ordered.

**Windows**
The facade is dominated by the pattern of the windows. On each floor, a square of 2 by 2 windows is repeated along the facades. The lower two windows are slightly more narrow than the upper ones, breaking the vertical strictness.

This pattern is not repeated in the transformation of 1955. The two windows frames above each other have been replaced by one elongated frame. On the top floor, the separation of 2 by 2 by 2 is cancelled, the windows are placed in a monotonous row.

The steel frames are in the upper window rows divided in a grid, a style element that can be found in the whole neighborhood.

In 1992, the steel windowframes on the Roelofstraat and van Alkemadeelaan have been replaced by synthetic ones and double glazing. This is due to new regulations regarding noise pollution. Unfortunately, the grid in the upper windows disappears and is replaced by a more simple division in three horizontal compartments.

**Bricks**
The brickwork facade is structured by the rules of the Flemish bond, where header - stretcher - header alternate each line. In between the windows, an alternative bond is chosen with a three-quarter bat.

Above the windows, the architect uses a variation in the brick bond: the bricks are placed vertically, forming a row of either 15, 17 or 19 layers. The brick used for the building has the dimensions of 214 by 102 by 42 mm, also known as a 'Vecht-formaat'. This brick is not as thick as the commonly used Waal-stone, and is probably used here to emphasize the horizontality of the facade.

The thickness of one layer of brick and one layer of mortar is averagely 52 mm, making the joint 10 mm. The 'koppenmaat': header plus joint, is 112 mm, a size that comes back in the total thickness of the wall - 112, 224, 336 or 448 mm.

For the transformation of the building, the executing architect used the same type of brick. Because of soiling, the original bricks were somewhat darker than the new ones (image p. 9), but this difference disappeared as the years passed. Nowadays, the line between the old levels and the new ones, is almost invisible.

In the facade, we can see variations in depth and bonding of the brickwork. The most prominent are the vertical beams located in between every other window. These do not only emphasize the order in the window pattern (in pairs), but also show a hint of the construction of the building. On these places, the concrete columns are located in the facade.

**Ceramic**
There are two prominent horizontal lines visible in the facade that repeat themselves. First, the floor slab, covered with ceramic tiles to protects the concrete and drain the rainwater. This is another element in the facade that shows the inner structure: these lines correspond with the level of the floors inside. These tiles are used as well on the edge of the canopies and roof edges.

**Natural stone**
A second horizontal accent is made with the thresholds between the 2 by 2 window frames. These beams of tuff stone support the facade and at the same time emphasize the lines of the facade. A decorative accent is made at the connection with the vertical brick beams. The same material is used on top of the base layer of the facade. This thick layer of stone embodies the windows of the souterrain and shapes the stairs and foundations of the building.

**Interior**
The interior of the building is very sober and most of the original materials have been replaced, but there are a few elements that are worth noticing and preserving.

The door portals show detailed wooden doors with steel decorations. The staircases are finished with green blue tiles and cast iron railings. Some hallways still have the semi-transparent frosted glass office walls.

The material is thus used in a very traditional and consistent way, and has besides the protective and decorative function also a connection with the interior: the placement of the windows, horizontal lines and vertical brick beams, reveals the core construction system.
What is the dominant order in the facade and what are the changes?

As described on the previous page, there is a specific order to be found in the pattern of the windows. In the original situation, shown in the black and white pictures on the right. Apart from the vertical accent on the corner, the pattern shows a very clear horizontality. This is emphasized by the different dimensions of the windows. But apart from that, we can say that the building excels in its coherence and repetition of the same window patterns. The only big exception is the rounded staircase, where the windows follow the landings of the stairs.

When the building changed over the years, this simplicity and coherence weakened with the additions of the upper floors and with that, the addition of new window types. Visible in the photos is that on the top floor, the division of the windows in pairs of two is completely lost. This is probably done by the architect to emphasize the different volumes, and maybe even to create a modern cornice, that together with the natural stone base, refers to the classical architecture. On the third floor, the pattern of the windows in pairs remained, but the sets of four disappear. The schematical drawing in the upper right corner shows these differences.

Besides the changes on the upper floors, the heads of the wings have been altered strongly during the transformations. Where the emphasis first laid on the repeating pattern of the same window frames, these have been replaced by a more complex composition. One long vertical window following the stairwell is placed between small window frames, not anymore placed in the horizontal order of the other facades. Although this might seem as a strange change, this same vertical window can be found on the head of the building block on the opposite side of the street. The same vertical windows can be found in the narrowing part between the main volume and the middle wing (see pictures below). By using this corresponding style, the coherence in the head facade is not completely lost and makes a new connection towards the surroundings.
What have been the changes in the climate design of the Octrooiraad building?

In the 1930s, the building was built according to the then prevailing standards of climate design for offices. As the years passed, the inner climate proved to be of insufficient quality.

When we look at the section of the facade, we can see that the brickwork facade has no cavity or insulation. The thickness of the brickwork (mostly 448mm) offers a thick skin with a high thermal mass, the brick regulates the humidity by absorbing and vaporating moist. But the inner climate is eventually not protected from the outdoor temperature. All parts of the facade are in fact a cold bridge: the concrete floor slabs that connect inside with outside, the single glazed windows, steel window frames and massive brickwork. Insulating the building from the inside is not ideal, since that would diminish the effect of the thermal mass of the bricks.

The building was initially provided with radiators. The oil-fired installations were placed on the basement floor, the pipes run vertically through each office to the top floor. The old installations were replaced in the 70s, probably by modern boilers. The offices have no mechanical ventilation, as all the windows were openable. But the bigger spaces, like the restaurant and the meeting rooms, are located around the middle wing and are ventilated mechanically due to their function. Fresh air is sucked in at the facade, through an AHU and blown in via the ceiling. The used air is blown out on the other side of the middle wing (image below).

Besides the small changes and the adaptation to the extensions of the building, the climate design stayed unchanged until the Octrooiraad moved out in 1973. In the period from 1973 to 1975, the climate installations were updated to meet the requirements of a possible new user: a mechanical ventilation system was installed, as well as a KW installation, next to the new fire escapes and interior changes. In 1979 and 1980, the windows on the van Alkemadelaan and Willem Witsenplein were replaced by plastic frames with double glazing. This slightly improved the insulation of the building, but did not solve the problem of the other cold bridges. A complex tangle of shafts, pipes and lowered ceilings is the result. In spite of these improvements, the complaints from the new user (Ministry VROM / Rijksplanologische dienst) came soon after their moving in around 1980: drafts, a very cold inner climate and a bad air quality. The last big user, departments of the Ministry of LNV, had the same problems: drafts, cold, moisture problems, bad ventilation and heating. Nowadays the few temporary users are suffering the same problems, especially since they are spread over the entire building and do not heat the whole building. Improving the indoor climate is therefore the biggest challenge for the future.

What have been the most important changes to the building?

1939-40: addition of west wing

Looking at the original situation and alterations, the building can be understood from a technological level as well as from a historical perspective. The two most important changes to the building have been the additions of 1940 and 1955-1959, in these transformations the original structure and design values have been altered in various ways.

For the construction, the main principle of a concrete structure combined with brickwork facades is continued in the transformations. The small changes on the top floor do not affect the character of the building, besides the intended morphological change.

The use of material connects well with the surroundings in the same traditional style. The horizontal lines and vertical elements in the facade are not purely decorative but show the structure of the building: the floors and columns.

In the transformations, the same materials have been used very consistently. The differences in color between old and new faded with the years and concealed the later addition of the top floors.

Value assessment

The climate design of the Octrooiraad building is very outdated, interventions during its life span did not prevent the building to have a inner climate that does not match the current quality demands. The interior is now characterized by various installations, shafts and lowered ceilings. Radically improving the inner climate is the biggest challenge for the redesign of the building.

These design principles of the material use gives the facade its clear structure, together with the strict pattern of the windows. The original building mass was dominated by the horizontal lines of the windows, but this changed on some points with the transformations. On the two added floors, the system in the 2 by 2 windows was lost, but the horizontal lines were continued. The corner on the Willem Witsenplein changed the most for the overall composition of the building, but the heads of the wings on the Weissenbruchstraat were changed from a horizontal accent to a very clear vertical direction. By adding the elongated windows, the building connects more to the surroundings, but lost its original simplicity of one window layout.

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On the urban scale, the building of the Octrooiraad is located in a very green neighborhood of The Hague. In the Benoordenhout, we can find back the three different green structures mentioned: lines, surfaces and volumes. The lines, lanes with trees, are closely linked to the scale of the building blocks. The surfaces, in this case mainly sportfields, are mostly hidden behind the volumes, the most dominant one being the dense green forest of the Haagse Bos. Besides the three main structures, the Benoordenhout is characterized by the gardens, forming in fact a line of volumes. To the lines, surfaces, volumes and gardens, I have linked characteristics of the neighborhood: monumental, leisure, nature and residential.

Around the Willem Witsenplein, the monumental, residential, monumental and nature encounter. This gives the Octrooiraad building an interesting position in the urban structure of The Hague. The building connects to the residential neighborhood designed by Berlage of The Hague. The building connects to the residential building an interesting position in the urban structure, in this case mainly of the building blocks. The surfaces and volumes, green structures mentioned: lines, surfaces and volumes. The lines, lanes with trees, are closely linked to the scale of the building blocks. The surfaces, in this case mainly sportfields, are mostly hidden behind the volumes, the most dominant one being the dense green forest of the Haagse Bos. Besides the three main structures, the Benoordenhout is characterized by the gardens, forming in fact a line of volumes. To the lines, surfaces, volumes and gardens, I have linked characteristics of the neighborhood: monumental, leisure, nature and residential.

In conclusion, I want to point out that the building has the potential of becoming a new boost for the neighborhood and the region of The Hague. The values stated below in the value assessment should be considered well in the discussion and process of the redesign, with the goal of reinventing the octrooiraad building.

**Value assessment**

- **on the intersection point of residential, monumental and nature**
- **well-balanced composition of building mass**
- **material use and horizontal elements connect with neighborhood**
- **interventions are part of the building history and added a new dimension**
- **round tower became part of main volume instead of separate shape**
- **emphasis on horizontality and connection with surroundings is lost with transformations**
- **climate design is inadequate and outdated**

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**LITERATURE**


Images


