Publicizing Vacant Heritage

Combining public accessible use with elderly housing in the Koudenhorn in Haarlem to stimulate social interaction

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Colofon

Graduation report prepared for the master's degree in architecture at the Delft University of Technology

Title
Publicizing Vacant Heritage: combining public accessible use with elderly housing in the Koudenhorn in Haarlem to stimulate social interaction

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Introduction

This year's Heritage & Architecture – adapting 20th century heritage – vacant heritage- deals with police real estate. Since the establishment of the National Police in 2013, the police force in the Netherlands is facing a significant real estate challenge. During the upcoming years, around 700.000 square meters of real estate will be divested and up to 30 % of the real estate objects are in need of redevelopment. Atelier Politie Bouwmeester provided a list with a total of 10 buildings that will be divested in the future to work with during the graduation studio.

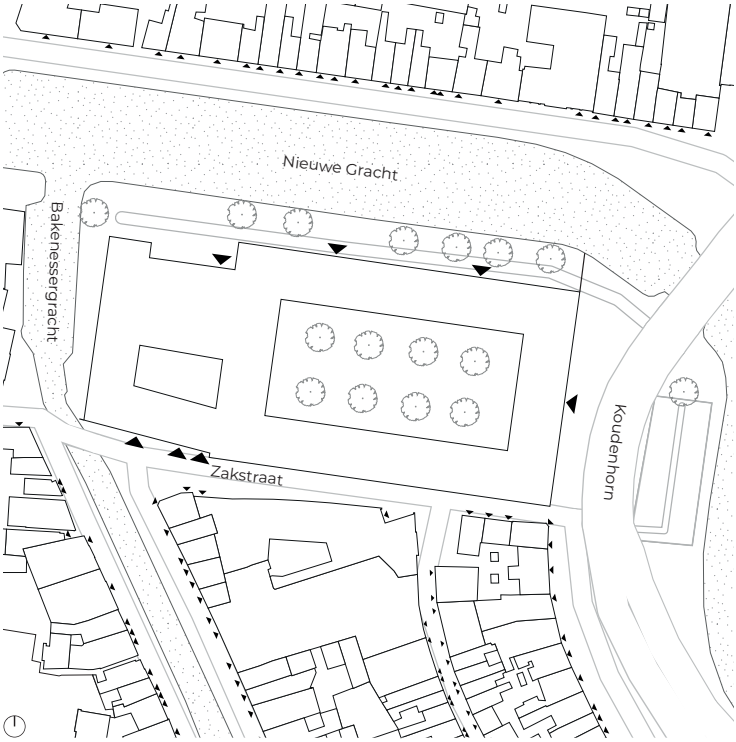
The building selected from those 10 for the individual project is the Koudenhorn building in Haarlem. The koudenhorn was designed and built by mastercarpenter Jan Smit between 1768 and 1771. The building was built as a deacon house to house the elderly and poor inhabitants of the city. Since 1971, the police is located in this building.
The complete research consists of multiple parts. The first part is a collective research into the Spatial Building Typology (SBT) of eight buildings.This research aims to discover the similarities and differences in the spatial characteristics of a group of buildings and how this influences the redesign options. The buildings are analyzed on the four scale levels of inner city, urban block, building object and building envelope. The results are collected in the second volume of the SBT book (Zijlstra et. al, 2022) and give an overview of the current situation of those buildings that serves as a basis for the re-design.

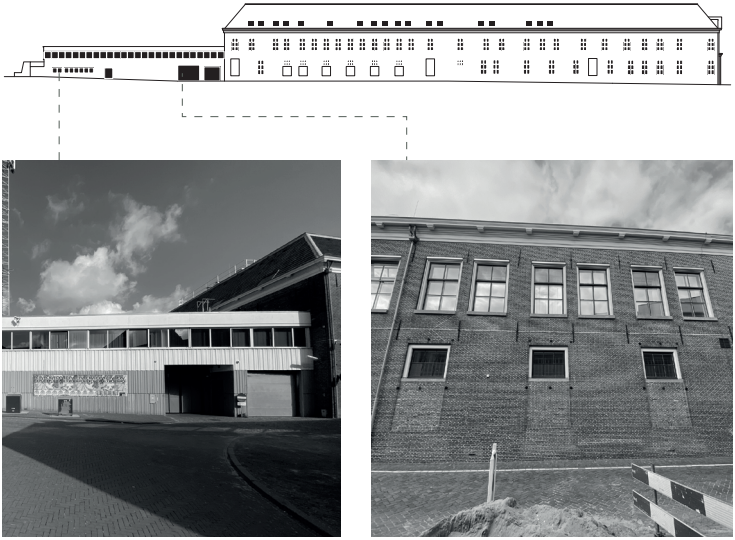
The SBT research is partly used for the building analysis of the Koudenhorn building. The building analysis is conducted together with other students working on the Koudenhorn building. The analysis elaborates on the city of Haarlem, the building in the context, the spatial layout of the building and the building technology.
While visiting the Koudenhorn, the disconnection between the building and public space caught the attention and raised questions on how the building could work if it would have a public use. Those observations led to the topic for the individual research into the topic of public interiors and public accessible space. The aim of the research is to discover the architectural aspects that influence the public character of interior or enclosed spaces. Applying a literature study on six case studies results in an overview of strategies for eight architectural focus points that can be tested and applied during the design process.

The need for housing is still a relevant problem. Part of this problem is assigned to elderly while they often only move out of their current dwelling when they are in need for housing combined with care. However, the actual problem, which is also visible in Haarlem is a shortage of suitable elderly housing. Also elderly housing is often experienced as not appealing enough to move to before people are in need of care. This results in the following design goal:
How could the Koudenhorn in Haarlem be transformed into elderly housing that includes public accessible functions to stimulate social interaction both amongst the inhabitants of the building and with the neighborhood.

This design question is worked in a design proposal for the Koudenhorn where elderly housing is combined with public accessible and collective functions on scale levels of the urban surrounding, spatial layout of the building to the technical design of the building and interventions. Using existing features and the spatial layout of the building served as a starting point for the design together with the input from the individual research and building analysis.

Reseach


Nieuwe Gracht
Bakenessergracht
Zakstraat
Koudenhorn



Observations and Research Question

During a first site visit to the Koudenhorn building in Haarlem, and with a small research conducted during the MCs2 studio on the interrelationship between buildings and public space in the back of my mind, the enclosed character of the building and its disconnection with the public space caught my attention. The quay along the Nieuwe Gracht for example is only accessible by the police, so this facade with two important entrances can only be experienced from the other side of the water. On the other side of the building, a part of the windows of the facade are filled in with masonry again related to the interior use. These observations made me question how this building could function if it had a public use.

These observations led to the main research question for the second part of the complete research, the individual research:

"How could the Koudenhorn building in Haarlem be transformed into a building that will be perceived as a public interior by future users?"

The following sub-questions contribute to the development of results for the main research question:

- What is a public interior and what is the relevance of such spaces in cities?

- How does the concept of public interiors relate to the current and future use of a building?

- What are the architectural aspects that influence the public feeling of a building on city, building block, building object and building envelope level?

- What strategies can be applied when transforming a building into a public interior?

The goal of this research is to come up with a framework of architectural aspects that have an influence on the public feeling of interior spaces and strategies that can be applied to transform Koudenhorn into a public interior. This framework can be used as input and a way to reflect during the design process.

Methodology

The research into the topic of public interiors and public accessible space includes various research methods.

- Literature research

The first two sub-questions stated before deal with the concept of public interiors, the relevance of such spaces in cities and the relation to the current and future use of a building. Another question relates to the architectural aspects of that have an influence on the public perception of a space by the users on various scale levels. These scale levels include the connection of the building with the city, the relation with the buildings in the urban block and aspects of the building and building envelope itself. Literature research provides the theoretical base on the topic of public interiors and the relevant architectural aspects.

- Case study research

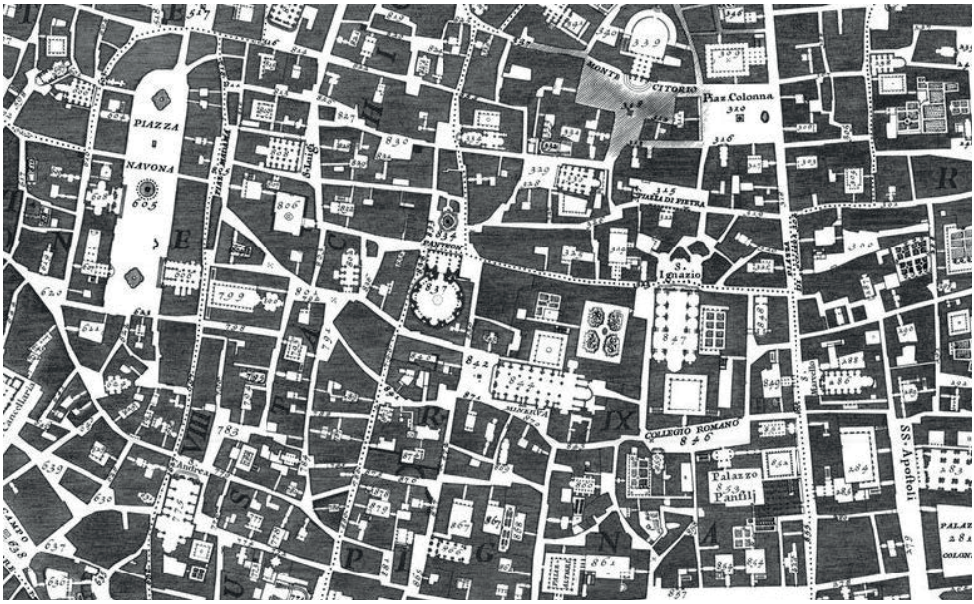
Next to the use of literature, the research of case studies will be a method to link the gained theoretical knowledge form the literature to physical examples. This case study research provides results for the last sub-question on strategies to transform a building into a public interior related to the architectural elements that influence the public perception researched in the literature.

The buildings selected for the case study are all heritage buildings that are transformed into a building with functions used as public interiors during the adaptive re-use design. The collection of case studies has a mix of functions, also including buildings or complexes where public interior functions are mixed with housing, relating to the design assignment.

The case studies will be analyzed by drawing analysis with plans, sections, elevations and reduction drawings as result. Next to this, location visits combined with onsite research into the behavior of people in these public interiors with the use of pictures, maps and written texts will be used as methods for the case study analysis.

The case study analysis will result in various strategies on multiple architectural aspects that can be compared for the case studies, but also with the current situation of the Koudenhorn retrieved from the SBT research. This results in an overview of strategies for architectural elements and aspects that can be applied or used as inspiration during the design for the transformation of the Koudenhorn.

I Theoretical basis



Nolli, G. (1748). Tile 5 of Nolli map of Rome. [Drawing]. Via https://www.mapmania.org/map/83726/tile_5_of_the_nolli_map_of_rome_1748_by_giambattista_nolli

Public interiors

Meeting is the purpose for public interiors' existence, and it is even part of the raison d'être of cities. The city exists because people need to engage with one another, to meet new people and to learn about new things, products, locations, knowledge, and culture. Covered, or in another sense enclosed, spaces that are public accessible and hence play a role in a city's urban tissue are referred to as public interiors (Boer, 2012). Interior areas like these are necessary for a city to be appealing and accessible.

The term "public interior" has its roots in the ancient architectural debate over public space. The 1784 map of Rome by Giambattista Nolli displays an anomaly in the city plan's colors. The public parts are denoted by a white outline, while the private portions are denoted by a darkened pattern. Nolli used white to represent the city's key public buildings in addition to the streets and squares. This already implies that internal spaces in publicly accessible buildings were considered part of the public domain (Poot, van Acker, & de Vos, 2016).

Arcades and glass-roofed shopping streets were the material embodiment of a civilization that integrated interior and exterior features in the nineteenth century. When examining the public interior, Maurice Harteveld elaborates in the chapters of his book 'Interior Public Space - on the Mazes in the Network of an Urbanist' on arcades, galleries, and early passageways, bazaars and marketplaces, the mall, the skyway, and the subway. In his work 'Binnen in de Stad, ontwerp en gebruik van publieke interieurs,' Matthijs de Boer expands on even more uses, such as shops, cafes and restaurants, post offices, train stations, libraries, town halls, educational buildings, and health care facilities.

The functioning of public interior spaces is influenced by a variety of factors at multiple scale levels, including urbanization, architecture, use, and ownership. On an urban scale, the location inside the city, particularly the connectivity to the pedestrian network, is critical. The availability of public interiors and other urban facilities, as well as the connections between them, could benefit each other. The number and position of entrances are important for network connectivity and accessibility of public accessible spaces.

There are also other architectural physical features that are related to urbanism. A straightforward and simple floor plan is excellent for accessibility and public character. Transitions between outside and inside, between public and private, should make it apparent until where the public accessible space remains.

The public status of the interior space is shown by the architecture of the entrances. Entrances can be grand and obvious, or they can be discreet and modest, allowing one to gradually enter the inner space.
Pedestrian paths can appear through the public accessible space if an interior space has many entrances. It is possible to distinguish between spaces intended for route and spaces intended for staying in such spaces.

Porosity

The Nolli Map shows buildings as solid objects, implying a division in public space between private and public regions. Nolli was also working on the permeable feature of cities by abstracting the interior spaces of buildings in such a way that they become impenetrable. Nolli exposed the city's permeability as structured by the sequence of courtyards and public squares, as well as the continuity between the interiors of public institutions and the city's public realm, by depicting structures as solids. Eight elements of porous structures are described in the book 'PoroCity' (W. Maas, et al., 2018), which show similarities to the architectural characteristics of public interior spaces listed previously.

In their most basic form, solid buildings are boxes with a ground floor, roof, and four facades. Facades are distinguished by their orientation: one receives sunlight while the other does not. The upper levels of the structures receive more light than the lower levels. Direct sunshine barely reaches the inner portions, depending on the depth of the building. Buildings may lose their solidity and begin to adapt to their surrounds if they use solar exposure to decide their outward shape and increase the amount of daylight per unit. Sunrays become a driving force, sculpting structures and attempting to penetrate their solidity. What would a building look like if every livable unit got at least two hours of direct sunlight every day. Openings would serve to naturally warm different portions of the building, reducing the need for heating and artificial lighting while also providing needed shadow.

Constrained by the opacity of their surrounds, solid buildings can act as visual barriers, giving the impression of visual enclosure. Porous construction approaches would maintain visible continuity from the outside to the inside of a structure, as well as from the bottom to the top. Floors would no longer appear to be visibly separated from one another. As one progressed vertically, each step provided a new and different perspective, resulting in a varied panorama for contemplation.

More public patios are needed in cities. Horizontality and verticality are separated in the solid city. On the rooftops of solid structures, there is normally one, often unreachable, terrace. Balconies are sometimes available, however they are usually private and insufficient to accommodate more than one or two individuals. By relocating levels, more balconies would be created, creating a plethora of terraces - areas for public life, social engagement, and meeting neighbors. Alternatively, the terraces can merely boost natural light.

Buildings must be able to breathe. Natural ventilation is required. Average temperatures rise as a result of the heat island effect. Porous buildings, like a three-dimensional skin, act as natural climatic control systems, acting as a zone of exchange for fresh air and heat. They operate as a sponge for water, retaining and filtering air, and therefore providing a variety of natural climatic conditions and temperature gradients.

Cities require more greenery. Green spaces improve air quality, absorb carbon dioxide, and provide recreational opportunities. The rigidity of concrete buildings limits the world of vegetation, reducing it to parks, terraces, pots on balconies, and indoor planters to embellish atria. Porosity is a concern for the future. Every pore has the ability to contribute to the creation of microclimates, the production of humidity, and the absorption of carbon dioxide and dust particles.

Cities are made up of a combination of circulation and transportation flows. The stiffness of structures and infrastructure constrains flows at various scales. The city's veins – the sidewalk and the elevator, the fast lane and the slow lane, the highway and the street, public transportation networks and the cycling lane – all provide constant fluctuation coordinated at different speeds. Buildings' foundations could be lifted

or opened to give quick access via their construction. As a result, they would become part of the city's infrastructure, connecting people and activities while combining efficiency and spatial features. It is simple to cross and traverse a porous city.

It's a city with a variety of shortcuts that weave together slow and rapid routes. Access would be evident, and it would become a prerequisite for social interactions, a diverse program, and innovative spatial features. As a result, points of access would become destinations in and of themselves, with the network operating as a possible journey.

Solid structures can emphasize the duality between inside and outside, public and private. They can highlight the contrast between society's interiorization and social life's exteriorization. The inside and outside of a permeable city are mixed together. The architecture of thresholds and transitions is celebrated in such a city. The semi-public, the semi-private, the private, and the intimate eventually mix, meet, and converge to generate an intimate experience and a transitional series of spaces between the public sphere and the semi-private, the private, and the intimate.

Porosity goes against the program's homogeneity. Its goal is to make the programmatic composition of buildings more diverse. Buildings become social interaction hotspots in a city that is less crowded but more intensive. They morph into hybrids. Pores serve as a glue for thematic cohesion. The public domain is absorbed into the architecture of porous buildings. Buildings serve as program condensers, boosting synergies between various tasks and allowing private constructions to create public space.

The use of public space

Jan Gehl elaborates in his books on the use of public spaces and how to stimulate the use of public spaces. These theories are all based on and described with outdoor public spaces. However, those theories could still be applicable to interior public spaces as well, to stimulate the desired use of a public interior space. Also various kind of public interior spaces relate various uses, while a passage or arcade functions different than a townhall or library. The theories of Gehl could also be applied on the courtyard of the Koudenhorn, while it is an option to add the enclosed garden to the public network.
According to Jan Gehl, the activities happening in public spaces can be categorized in three main groups. The three categories are necessary activities, optional activities and social activities. All three have their own interrelation with the environment and therefore have different demands for the physical surrounding.
The category of necessary activities includes the everyday tasks of which most activities are related to walking. The activities include going to work or school, shopping or waiting for public transport (Gehl, Three types of outdoor activities, 2011).
The second group are the optional activities and include actions that are participated in if there is a wish to do so and the place and time provide the possibilities for them. Activities in this group are going for a walk to get fresh are, sitting in the sun or standing and enjoying life.
The last group of actions are the social activities and are dependent on the presence of other people in public spaces. The activities include playing children, meeting, conversations and communal activities. This group also includes the passive contacts, which is just seeing and hearing other people. These activities can happen spontaneous, while they are a direct result of multiple people being in the same space.
The quality of the public space becomes more and more important towards the third category of activities. When an public space is of poor quality, only the most necessary activities will occur. If the area is of higher quality, these activities will still occur, however they will take more time. Next to this, a lot of optional activities will happen in a good quality space, while the space is more inviting. In the end this will have a positive influence on the social activities as well.

Not only the quality of public spaces for the activities happening, they are also based on the context in which they take place. Necessary activities are more or less independent of the physical surrounding, but the optional and social activities are influenced by the exterior environment (Gehl, To assemble or disperse, 2011)

Integration of functions:
The first pair of concepts in urban design that influence the use of space are integration and segregation. Integration means that various activities and groups of people function next to each other. On the other hand, segregation means a separation of the activities and groups (Gehl, To assemble or disperse, 2011).
The integration of functions and a diverse range of activities next to a public space allows people of various functions to interact with people of other functions. Important for the integration on a smaller scale is not specifically the distance between the various integrated functions, but the possibility of various groups of people to make use of the same public space.

Assembling of activities:
The second group of concepts are assembling and dispersing. By assembling people and activities, it is possible for events to stimulate each other. In this way, participants in a situation have the possibility to participate in other events as well.

Inviting public space
The third pair of concepts related to public space is inviting and repelling and they have to do with the accessibility of public spaces. If the public space is accessible, it encourages people and activities to move from the private space into the public. These concepts are therefore mostly related to

the border between the public and private areas. If these borders are fixed and sharp it can be experienced as hard to enter the public space. A transition zone between the public and private domain can improve the connection between the two.
Next to the transition zones, a visual connection with the public space can be an invitation to enter the public area. For example, if children can see outside from their house and see other children playing outside, they can get more motivated to go outside as well.

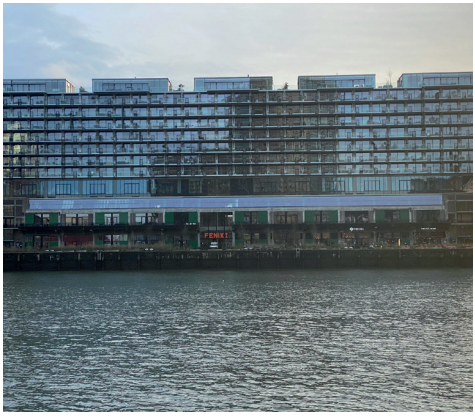
Opening up
Lastly, the concepts of opening up or closing in play for public spaces. This has to do with the contact through experience between what is taking place in the public space and what is happening inside the buildings adjacent to the space. This has not only to do with the openness of the facades and thereby providing visual connections, but also with the distance between a public space and other functions or buildings (Gehl, To assemble or disperse, 2011).

II Case study research

Hermitage

Blokhuispoort

Neherpark



Fenix I

Timmerhuis

Tuin van Noord

Selected case studies

The aim for the case study research was to analyze buildings, listed as monument, that are transformed into a building with functions used as public interior implemented as part of the adaptive re-use design.

However, during the process, Fenix I was added as case study. The transformation include a function change from private and closed use as warehouse to public use and housing, but the Fenixloodsen are not listed as monument.

The six selected case studies have a mix of functions, also including buildings or building complexes where public interior functions are mixed with housing.

The research into the physical characteristics of public interior spaces shows a close relation to the porosity and openness of buildings. Therefore this case study also includes buildings or complexes that show less connection to the strict definition of public interiors and more towards the opening up enclosed or introverted building or making the building or a part of the building or site accessible to the public.

The case studies are analyzed by drawing analysis with plans, sections, elevations and reduction drawings as result. Next to this, location visits combined with onsite research into the behavior of people in these public interiors with the use of pictures, maps and written texts will be used as methods for the case study analysis.

The buildings and locations of the case studies were visited during Covid-19 regulations, which had an influence on spaces that are normally public accessible or limit the use of public interior functions with a maximum amount of visitors or the need to scan a QR-code at the entrance.

Therefore, the results of the observations of behavior and experience of public interior spaces are not in all cases representative for the use of a public accessible space in a normal situation.

Focus points

The theories of Gehl, Maas and on public interiors show commonalities in the physical characteristics of public interior spaces, how to design porous cities and building and ways to stimulate the use of public spaces. The aspects of these theories are combined in a total of nine physical elements that are analyzed for each case study.

Public accessible space:
The public accessible space of the case studies are the spaces that are open to the public. It is possible that there are limitations to the access of the public interior spaces, such as opening hours of a function considered as public interior.

Embedding in the city:
The embedding in the city deals with the connection of the public interior space and the building or plot it is located on with the context and how new routes are created. The embedding also relates to the position and the design of the entrances on an urban level.

Assembling of functions:
For the assembling of functions the function of the public interior spaces are analyzed. Also the other function related to the public interior space, adjacent to it or in the same building are analyzed.

Entrances to public functions:
Besides the entrances to the plot or building, the entrances to specific functions are analyzed as well. Also for those entrances the design and location influence the public character of spaces or influence the use of a public space.

Atrium/void:
Atria are considered as an important architectural element of public interiors. For the case studies, the use of atria or voids or an intervention that comes close to such architectural elements are analyzed.

Daylight:
Related to the atria and voids is the concept of daylight that influences the porosity of buildings and the public feeling of interior spaces.

Visual connections:
Visual connections deals with the contact between the pubic interior space with other parts of the building, with the exterior and the connection between other functions.

Security:
The amount and way of security influences the public feeling of interior spaces. Also the location of security elements as a ticket check in a museum influence the public interior space. The further a ticket check or similar security feature is located from the entrance, the more public an interior space feels.

Materiality and interior design:
The materiality and design of interior elements has an influence on the public character of an interior space. If the paving of exterior public space continues on the interior, the public feeling improves. Similar hard materials such as stone or tiles have a higher influence on the public feeling than a slightly softer appearing material such as polished concrete. Carpet and textile works in an opposite way and gives a more private feeling.

Hermitage | Amsterdam

Project information

Location:	Amsterdam
Former program:	Deaconhouse
New Program:	Museum in Amstelhof
Use:	Museum
Architect:	Hans van Heeswijk architecten
Completed:	2009
Floor area:	14.000 m^2

The Amstelhof

On October 18th in 1680, merchant Barent Helleman died. He left his wealth of 90.000 guilders to the Deaconie of Amsterdam. With this money, a start was made on establishing a home for 'oude besjes' (old grannies). The city donated a piece of land and city architect Hans Jansz. Van Peterson was hired for the design.

The completion of the 'Diaconie Oude Vrouwen Huyhs' with a strict 102 meters wide façade followed in 1683. Behind it was room for a total of 400 women. In the two side wings of the building, chambrettes were furnished, which were rooms where the ladies lived. In 1817, the use expanded with housing for old men as well (Hermitage Amsterdam, 2019).

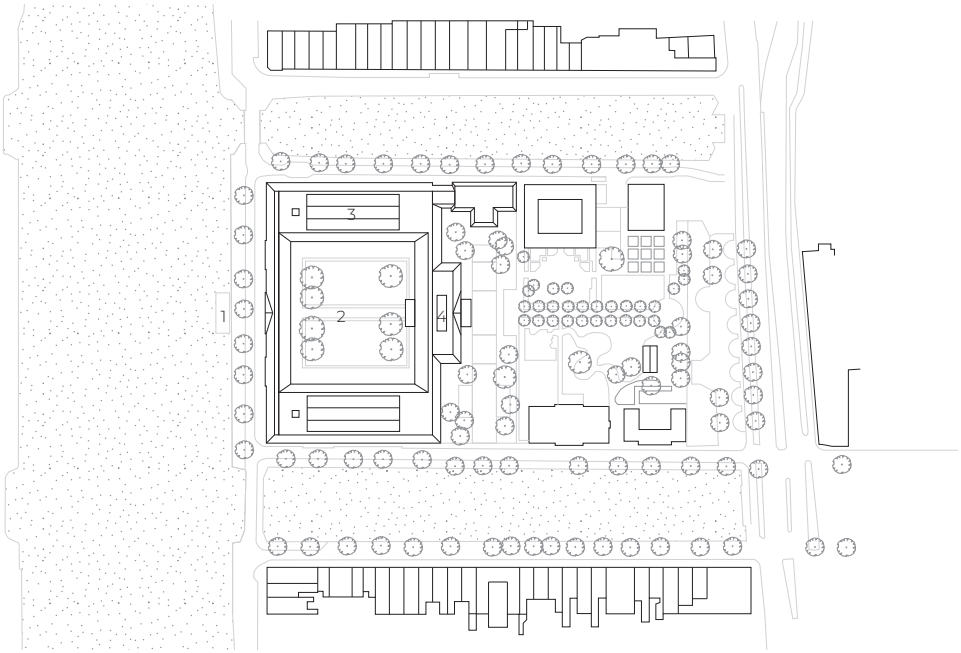
Over the years there have been quite a few renovations. Early on, the original kitchen proved to small and a new one was built in the basement. This kitchen can still be seen in its original condition in the Amstel wing, close to the reconstructed Regentessen room. A major renovation took place between 1970 and 1979, but less than 20 years later it turned out that despite the improvements, the building no longer met the requirements for appropriate foster care. In 2007 the last residents would be transferred to other homes.

That was long after Ernst Veen, director of De Nieuwe Kerk, conceived the idea of giving Amstelhof a new destination: partner of the Hermitage St. Petersburg. A place for exhibitions of art from the vast – more than three million objects – treasury of that Russian museum.

The conversion into a state of the art museum building lasted from 2007 to 2009. Architect Hans van Heeswijk designed the building, Merkx+Girod architects designed the interior and Michael van Gessel designed the garden. The outside has remained strictly classicist – stripped of all subsequent layers of paint – but inside it has become a completely new, open and light building. The Hermitage Amsterdam was opened to the public on 20 June 2009 with the exhibition 'Aan het Russisch hof' (Hermitage Amsterdam, n.d.).

Image: [Hermitage Amsterdam aerial view]. (z.d.). Hans van Heeswijk Architecten. https://www.heeswijk.nl/projecten/hermitage-amsterdam.html#&gid=1&pid=2

From Amstelhof to museum



Location of images

The Hermitage has a collection of 3 million artifacts, too many to display in St. Petersburg. After a number of successful exhibitions on Russian culture in the Nieuwe Kerk, the idea arose to establish a branch of the museum in Amsterdam (Architecten, n.d.). The Hermitage Amsterdam is the only independently run annex in the west of the Russian State Hermitage Museum. The museum in Amsterdam always displays two temporary exhibitions a year from the encyclopedic collections of the Hermitage in St. Petersburg and other Russian museums.

Hans van Heeswijk Architects was commissioned to turn the Amstelhof into a modern museum. The enclosed-looking building transformed into a light, open and spacious public building in striking location, in the middle of the city on the Amstel. The main entrance is again on the Amstel side and has been given its own jetty. Through the old 'ox gate' (ossenpoort) under the main landing, the public enters the courtyard garden, closed for centuries, which was redesigned by landscape architect Michael van Gessel.

Visitors walk from the entrace on the Amstel through the garden to the east wing with foyer, auditorium and restaurant. Even before the entrance ticket has been bought, the building presents itself in its full size. This tranquil courtyard with aged chestnuts is also accessible to people who do not visit the museum. On the other side of the garden is the spacious entrance foyer and the entrance to the exhibitions. Merkx + Girod Architecs designed the interior of the public areas.

1. Jetty on the Amstel

2. Redesigned courtyard

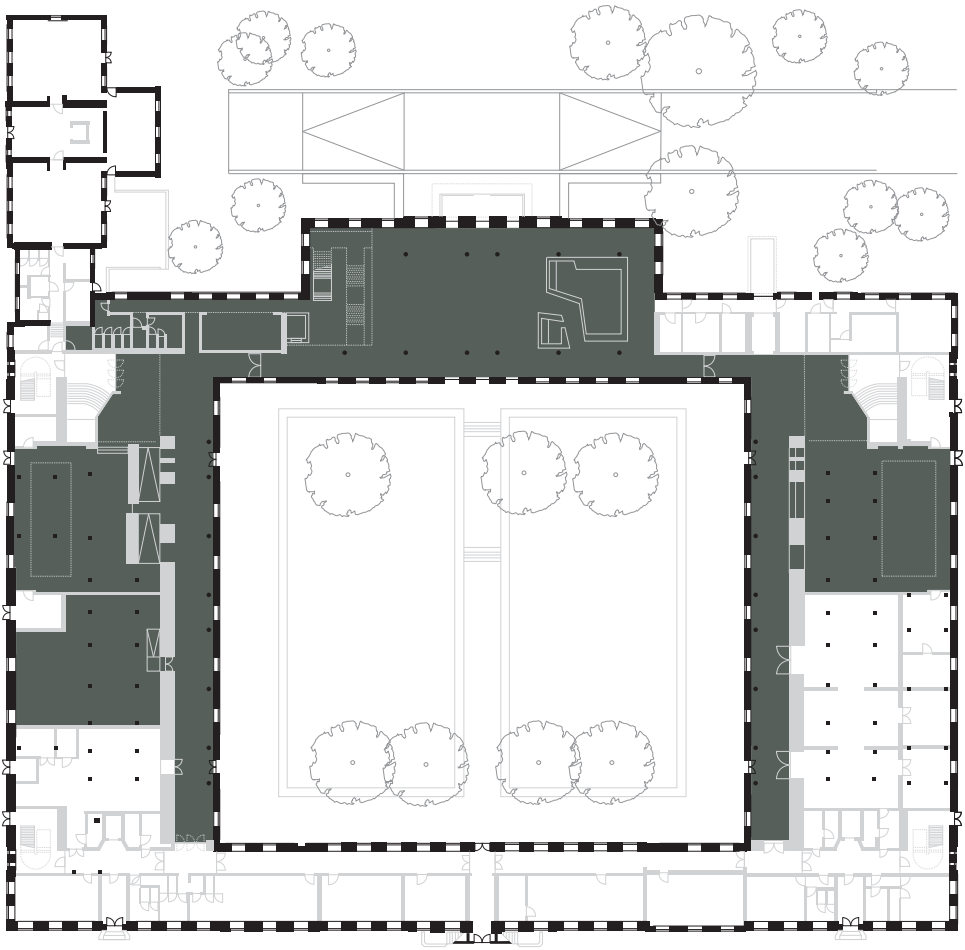
3. Exhibition cabinets

4. Auditorium

Clearness, spaciousness and sharp detailing are characteristics of the approach for this project. Long sightlines have been created through the axes of the building around the courtyard garden and through the enfilade of cabinets to the stairways in the corners. As a result, they can always be found at the end of such a line of sight from all places in the museum. By alternating the low floors present in the building with high spaces where parts of the upper floors have been broken away, generous spaces with double heights are created that allow in a lot of light. Due to this intervention, the interiors seems much larger and spacious than you would expect form the outside of the building.
The detailing is austere and abstract: there are virtually no carpentry, fasteners or other loose parts in the building, so that the overall image of the building is calm and graphic. A good example are the extremely transparent glass elevators and stairs (Herbestemming. nu, n.d.).

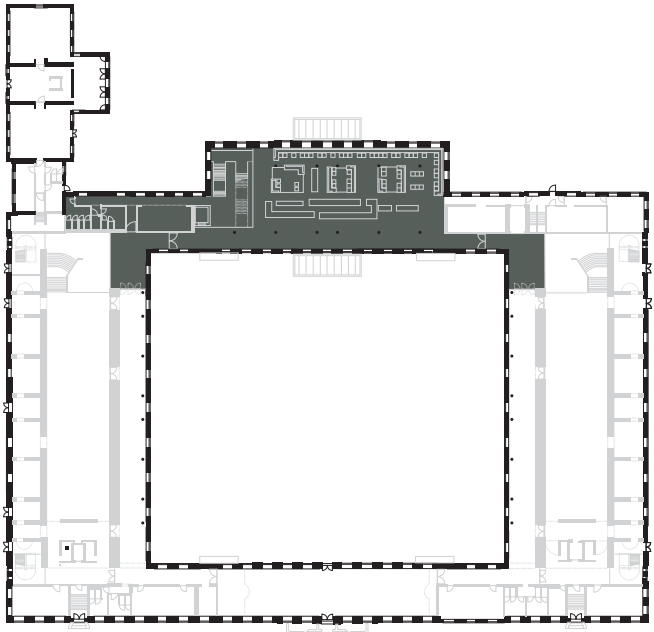
Image top right: [Hermitage Amsterdam courtyard]. (z.d.). [Photograph]. Hans van Heeswijk Architecten. https://www.heeswijk.nl/projecten/hermitage-amsterdam.html#&gid=1&pid=5 | Image left bottom: [Exhibition cabinets Hermitage Amsterdam]. (z.d.). [Photograph]. Herbestemming. nu. https://www.herbestemming.nu/projecten/museum-hermitage-amsterdam

Public accessible space

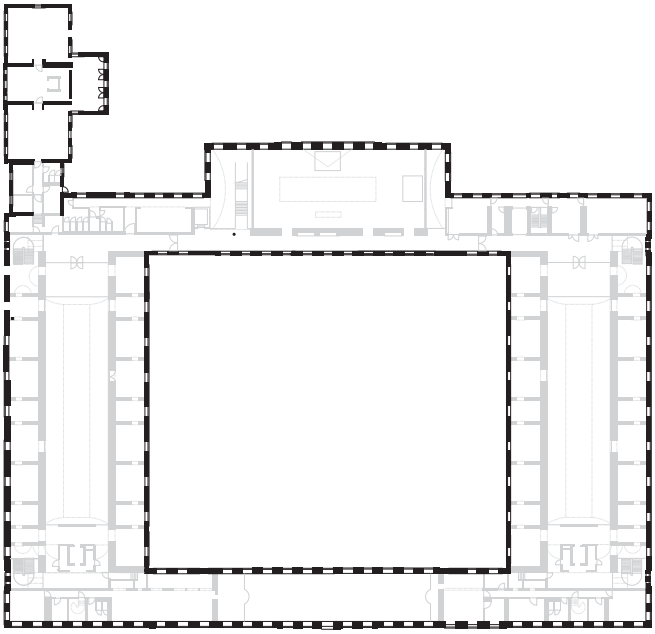


Public accessible space groundfloor

The public accessible space in the Hermitage museum is divided over two of the three floor levels. The main public functions are located in the east wing of the building, the wing on the side of the Hoftuin. The public accessible space on the ground floor extends via the hallways in the two wings along the courtyard side of the volumes connecting spaces located on the outer facades of the building. The east wings second floor houses a auditorium and meeting spaces. These spaces are not considered part of the public interior, while they need to be rented and not accessible to the general museum visitors. However, in case of a lecture or meeting, the third floor connects easily with the two floors below due to the central staircase. The courtyard could also be considered as part of the public interior, while it is part of the privately owned plot of the Hermitage, but allows for an informal and public use.

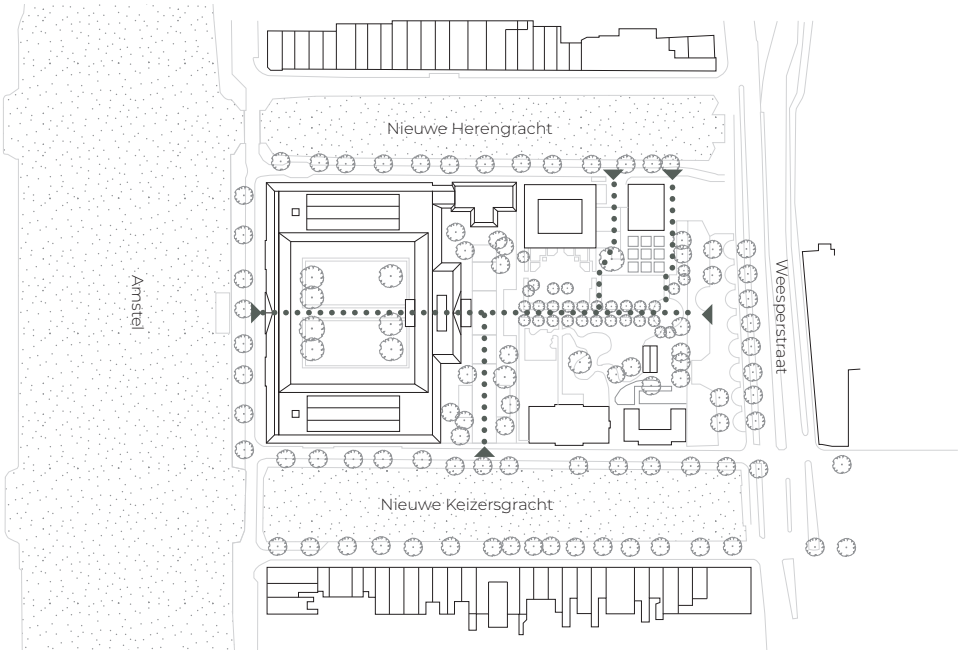


Public accessible space first floor



Public accessible space second floor

Embedding in the city



Entrances and routing

Routing and entrances

The Hermitage museum is located alongside the Amstel, in between the Nieuwe Herengracht and the Nieuwe Keizersgracht. On the backside of the Hermitage, surrounding the collective 'Mien Ruys' courtyard, several buildings that are still owned by organizations related to the 'Protestante Diaconie Amsterdam' are located. These buildings are the Corvershof and Amstelrank on the side of the Nieuwe Herengracht and the Hodsonhof and De Van Limmikhof on the other side.
A total of five entrances provides access to the entire urban block with the central Hoftuin. The entrance on the left in the image is used as the main entrance for the museum providing access to the foyer through the courtyard. However, the foyer of the museum also connects to the Hoftuin on the other side making a routing through the courtyard and foyer of the museum to the Hoftuin possible. The entrance on the Nieuwe Keizersgracht provides access to the plot of the museum with terrace located on the north east corner of the building and the Hoftuin. The other three entrances give direct access to the Hoftuin, in which a cafe located and thus indirectly connect to the plot of the museum.

1. Entrance Weesperstraat

2. Entrance Nieuwe Herengracht

3. Gate in between Hermitage and Hoftuin

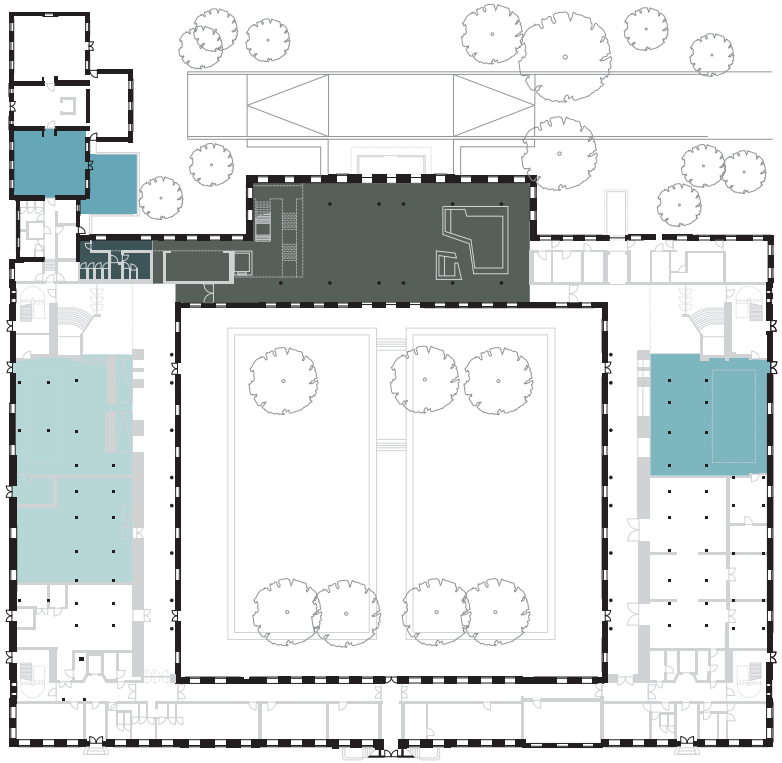
4. Entrance Nieuwe Keizersgracht

Entrances urban block and Hoftuin

The entrances to the Hoftuin located within the urban block are characterized by the use of gates. The garden serves as a meeting place and is open from Monday until Saturday from 10:00 to 18:00. The entrances with direct entrance to the Hoftuin are located on the Nieuwe Herengracht and Weesperstraat. With the construction of the National Holocaust monument, located in between the Weesperstraat and Hoftuin, the routing is extended through this monument, which is also only open during the day. The space surrounding the Hermitage is redesigned by Michael van Gessel during the transformation for the museum function. The plot of the Hermitage can be closed of with gates on the side of the Nieuwe Keizersgracht and in between the plot and the Hoftuin. These gates are distinctive from the other gates by their leaf based design as can be seen in the bottom two photos.

Image top left: [Hekwerk Hoftuin]. (n.d.). [Photograph]. Tripadvisor. https://www.tripadvisor.nl/LocationPhotoDirectLink-g188590-d6023677-i115715914-Dignita_Hoftuin-Amsterdam_North_Holland_Province.html | Image bottom left: Camel, C. (2018). Hekwerk op binnenterrein van Hermitage Amsterdam [Photograph]. https://commons.wikimedia.org/wiki/File:Hekwerk_Hermitage_Amsterdam_(4).jpg | Image bottom right: Camel, C. (2018). Hekwerk hermitage; toegangspoort Nieuwe Keizersgracht [Photograph]. https://commons.wikimedia.org/wiki/File:Hekwerk_Hermitage_Amsterdam_(3).jpg

Assembling of functions

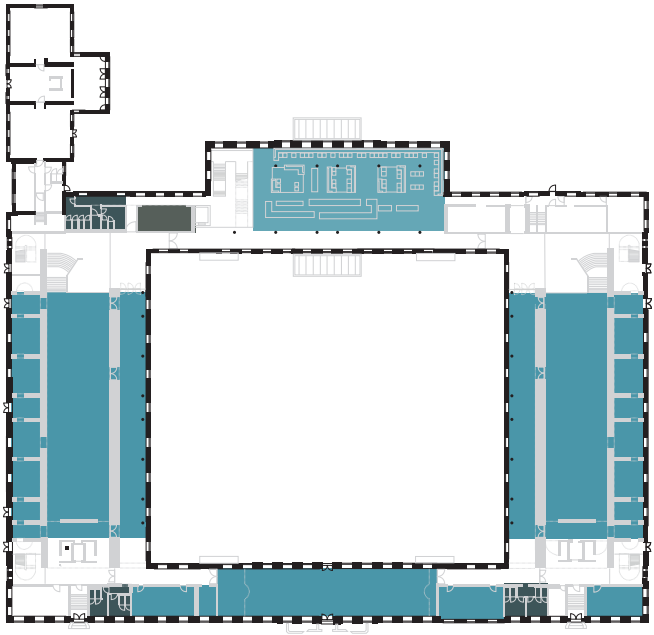


Functions ground floor

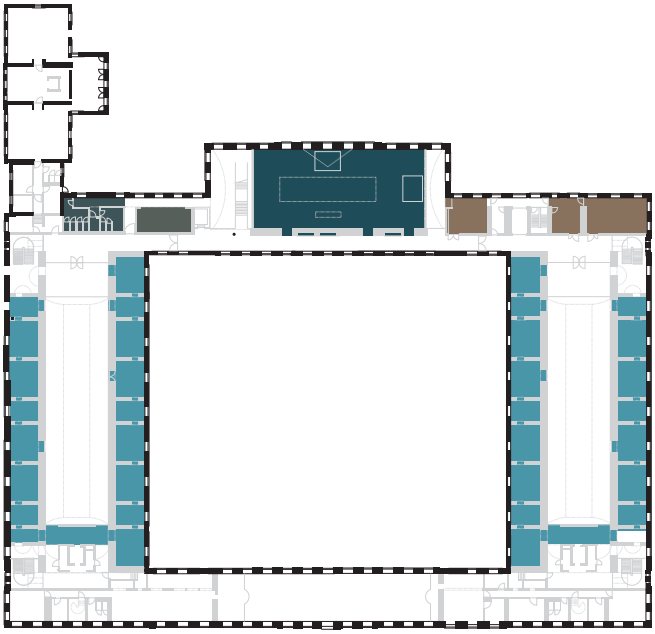
Museum functions

While the only function of the Hermitage is the use as museum, the analysis for the assembling of functions is different than for a mixed-use complex with multiple functions. Museums however, almost always have various functions implemented such as a museum shop, library, study spaces, cafe or restaurant. Therefore, the relation of those functions is analyzed for the assembling of functions in the case of the Hermitage. The main public functions are located on the ground and first floor of the east wing with the foyer with info and ticket desk, wardrobe and public accessible toilets on the ground floor and a cafe/restaurant on the first floor, which is also publicly accessible. The other public accessible spaces on the ground floor are a museum shop and study spaces that can also be used as additional exhibition space. In the case of the Hermitage the public accessible spaces are areas that can be accessed without the need of a museum ticket. With a ticket, the exhibition spaces on the first and second floor can be entered. Other spaces on the second floor are an auditorium and meeting rooms, which can be rented out for events and meetings and are therefore not included within the public accessible spaces. In general, the public functions are divided over multiple floors in one of the wings of the building. While they are all part of one function, there are no specific entrances for the individual functions, but they all connect to the routing in the museum.

Foyer
Toilet
Free exhibition
Cafe
Shop
Exhibition
Auditorium
Meeting room

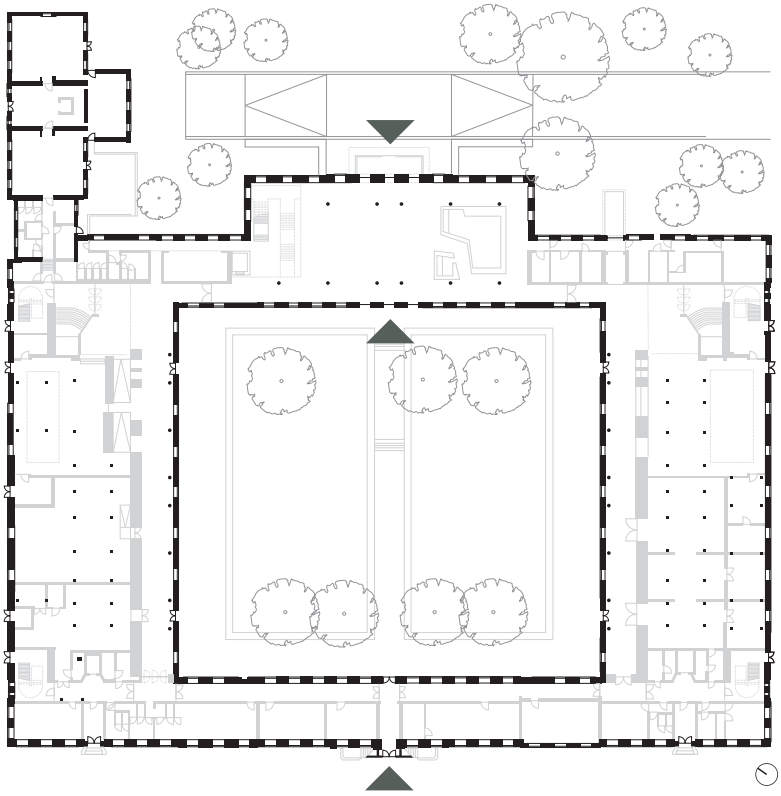


Functions first floor



Functions second floor

Entrances



Location of entrances

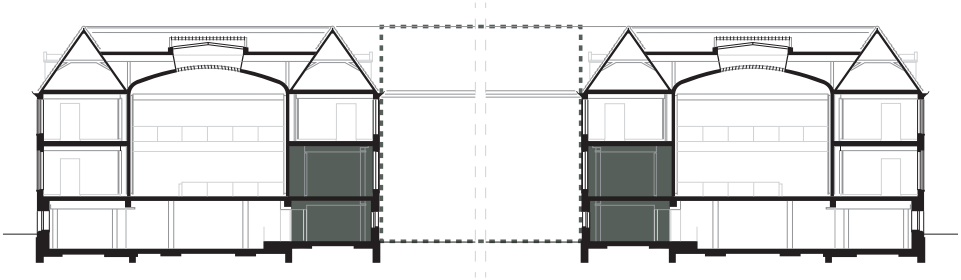
Entrances Hermitage

The main entrance to the Hermitage museum is located along the Amstel, indicated at the bottom in the floorplan above. This entrance provides access through the courtyard before reaching the entrance of the foyer of the museum. Thereby the complete size of the museum is experienced before even entering the building. The passage through the west wing of the building also provides access for personnel of the museum to the wing with most functions for the staff. The foyer can also be accessed from the other side of the building. The entrance gate on the Nieuwe Keizersgracht provides direct access to the plot of the museum and the entrance, which can also be reached indirectly via the Hoftuin with entrances on the Weesperstraat and Nieuwe Herengracht.

Design of entrances

The main entrance of the building, visible in the first image, is located in the most important facade of the building, the facade along the Amstel. The entrance itself however, is the most subtle designed entrance of the three entrances to the building. The entrance is placed in the position of the old ox gate under the main landing of a highly decorated door in the middle of the facade. The terrain towards the entrance is lowered to create sufficient height under the landing. This passage through the building provides access to the courtyard of the building and the entrance to the foyer of the building located in the east wing and visible in the second picture. For this entrance, three sliding doors are created in line with the rhythm and dimensions of the windows. The entrance is covered by an added canopy. The entrance on the other side of the foyer, towards the Hoftuin, is designed in a similar way. However, this entrance is enclosed with glass creating a draught lobby. Due to the openness of canopies, the original facades of the building remain visible.

Atrium & Void



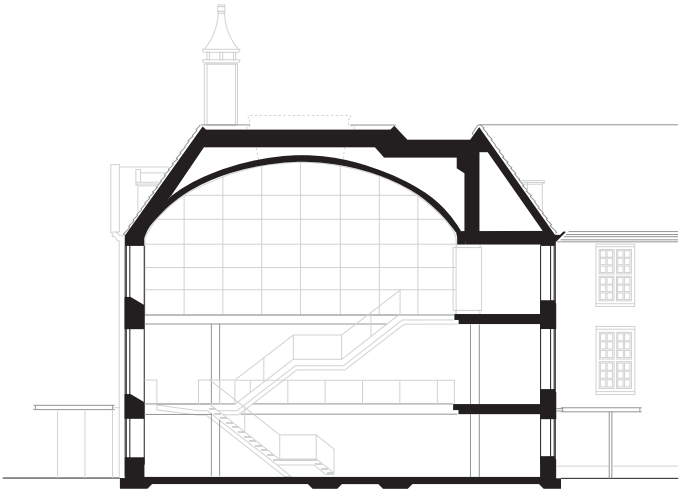
Courtyard functioning as atrium

View from interior to courtyard

Circulation space located along courtyard facade

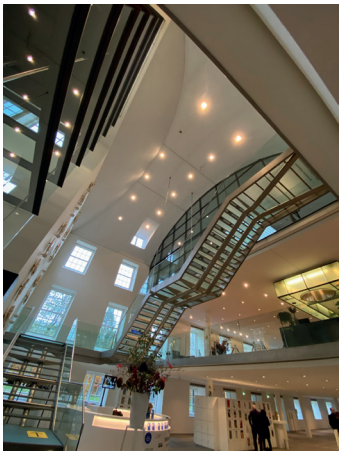
Courtyard as atrium

In the case of the Hermitage, the courtyard of the building could be considered as an atrium for the building, while it is a central open space in the heart of the building. The new spatial layout, mainly visible on the ground floor and first floor, strengthens this idea, while the interior spaces along the facades on the courtyard side are dedicated to circulation. Thereby the light is allowed inside and views to the courtyard are created from almost al wings on all floors. With this spatial layout, the building makes optimal use of the light and open space in the middle of the building volume.



Void with staircase

View from auditorium

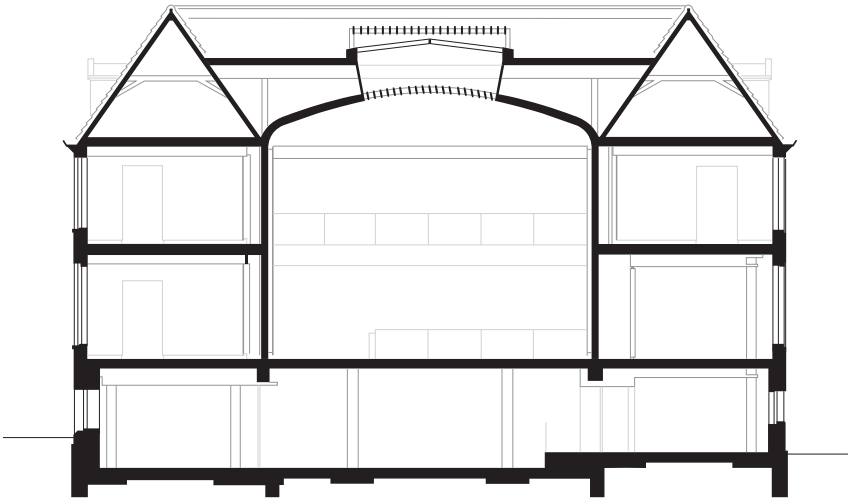


View from foyer

Interior void

On the interior, the central void with staircase in the foyer comes closest to the idea of an atrium. The staircase and lift are positioned in a large void along the exterior facade of the building open to the roof and connecting all the floors. Due to the position along the facade, the light entering the windows on the first floor and second floor falls into the void. The sharp detailing and use of glass for the stairs and lift, together with the curtain wall used for the atrium on the second floor adds to the openness of the void.

Daylight



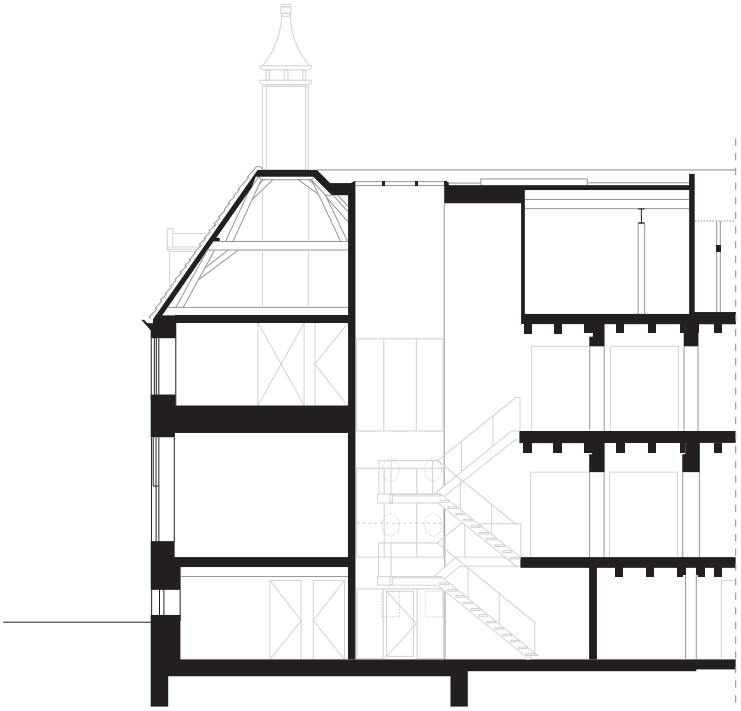
Section over exhibition wing

Roof window auditorium

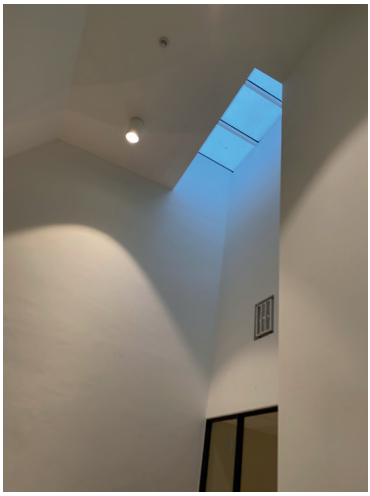
Roof window exhibition

Natural daylight

Daylight and museums are is not the most ideal combination, but in the case of the Hermitage, the existing buildings elements have been used in the most optimal way. The spatial layout in relation with the courtyard and interior void are interventions that also relate to the daylight condition in the building. With those elements and locating the exhibition spaces along the exterior facades, daylight is allowed in the building as much as possible. Next to those elements, other interventions related to daylight are the roof lights above the main exhibition spaces and auditorium. With the use of shutters, the incoming light can be regulated and blocked when needed for exhibitions and lectures. Additional roof lights are added above the voids with staircases of the exhibitions in the four corners of the building. With those windows, daylight comes in at the end of the exhibition cabinets whereby those staircases also work as guiding element. The glass curtain wall between the staircase with roof light and main hallway lets to light to this space as well.



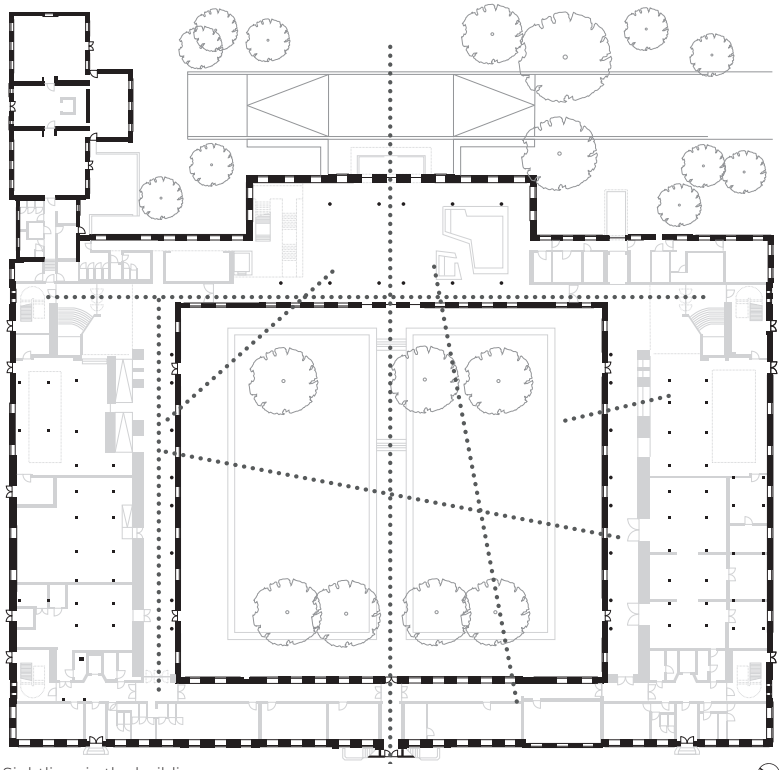
Section over staircase



Roof window in staircase

Light staircase as result of roof window

Visual connections



Sightlines in the building

Sightlines

The spatial layout does not only influence the daylight ingress in the museum, but also helps with creating sightlines to various building parts. On the exterior, black coating or foil has been applied to the windows and the windows are blocked on the interior, while the exhibition spaces are located behind the outward facing facades. Only the low windows on ground level, providing light to the ground floor, are open and allow for a visual connection. The most important visual connection is from the entrance through the courtyard to the entrance of the foyer. In this courtyard sightlines from outside to inside are possible even into the functions as the museum shop. On the interior, the hallways along the courtyard and openings through the cabinets in the exhibition spaces provide sightlines almost from one corner to another corner of the building, strengthened by the staircases at the end of those vistas. Various functions are visible by the sightlines through the courtyard. It is for example possible to look to the church hall on the first floor from the foyer on the ground floor level on the other side of the courtyard or the other way around into the restaurant. It is hereby also possible to see other people walking in other parts of the building or already catch a glimpse of what is around a corner.

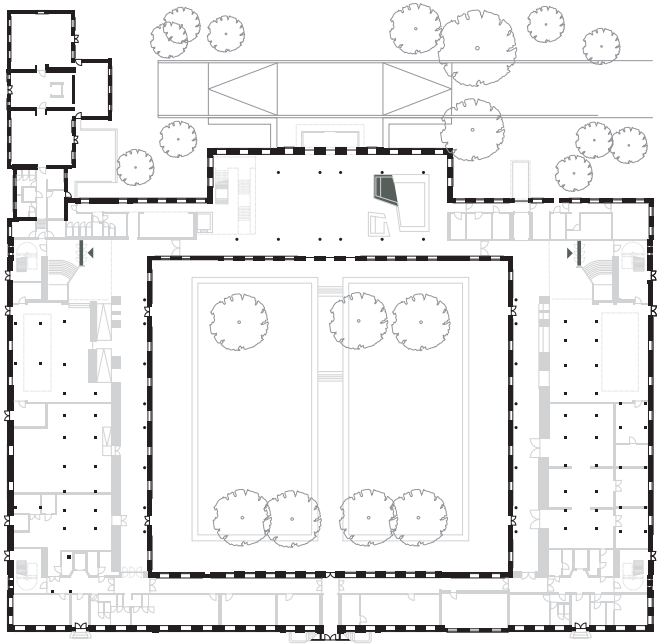
Sightline through courtyard

Sightline in hallway

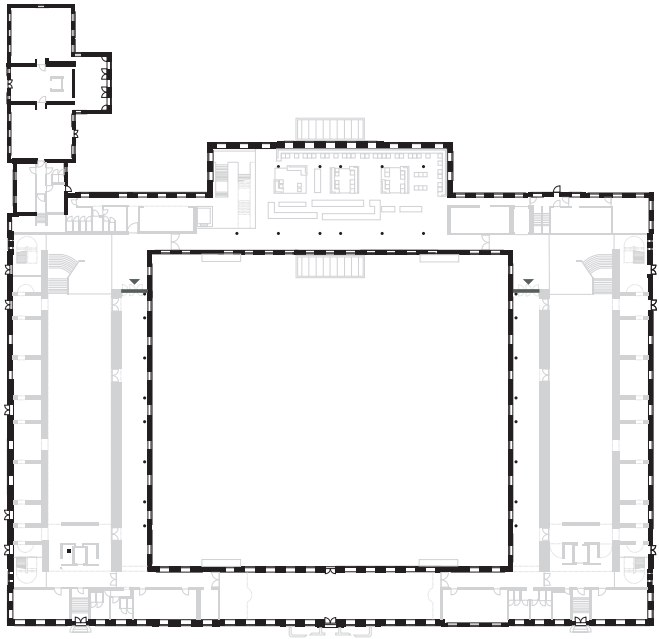
Sightline through main entrance passage

Windows creating views to interior

Security



Ticket check ground floor



Ticket check first floor

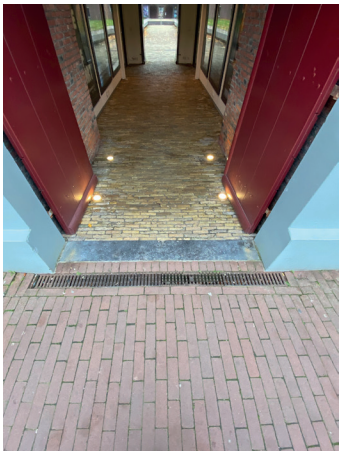
Ticket check

The location of the ticket checks within a museum influences the public perception of the public interior while the ticket check marks the end of the public accessible space. If the ticket check is located further from the entrance, the public character of the public accessible spaces improves, while there is a bigger part accessible without a ticket.

In the Hermitage museum, the location of the ticket checks is situated at quite some distance from the entrance, at the end of the hallways of the eastern wing. The staircase behind the gates connects to the exhibition space starting on the first floor. The exhibition space can also be accessed on the first floor just around the corner of the east wing. With the ticket checks in those locations, only the actual exhibition spaces are accessible for people paying for a ticket, leaving all the other functions accessible for the public.
A security desk is located in the entrance foyer of the Hermitage, which also has an influence on how people use the interior space, while the security is visibly present.

Image: [Ticket check]. (n.d.). [Photograph]. Hans van Heeswijk architecten. https://www.heeswijk.nl/projecten/hermitage-amsterdam.html#&gid=1&pid=4

Materials



Border at entrance passage

Stone tiling in foyer and hallway

Stone tiling at ticket check

Wooden floor finish in exhibition

Floor finishes

The materials create transitions between various parts within the building. The entrance and courtyard make use of a different material than the pavement of the sidewalks around the building. The variation in material, color and even direction creates a first border between the first public space of the streets and the public accessible space of the courtyard. On the interior, the floor the public accessible space on the ground floor is covered with stone tiles. Again another material than the courtyard creating a transition between interior and exterior, but the use of such a hard material adds to the public feeling of the public accessible space. Stone is also used for the staircases in the corners at the entrance gates to the exhibition spaces. When arriving at the first floor, the floor material changes to wood for the nonpublic accessible space of the exhibitions. This wooden floor also continues into the restaurant area.

Interior elements

Furniture in foyer

Foyer during visit

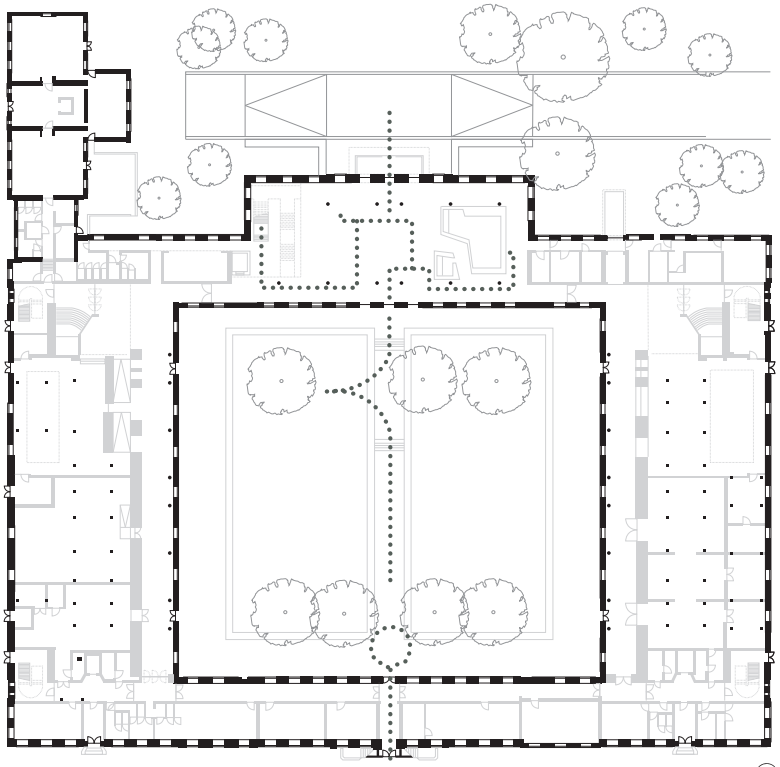
Windows used as sitting space by children

Furniture

The furniture of the entrance foyer has been part of the interior design of the Hermitage. The sitting element matches in design with the ticket desk and security desk. The incorporation of furniture, especially in such a larger element as visible in the image, adds more to a public character of an interior space than loose chairs, benches and tables. The thick walls create areas in the window openings to sit or lean against. These element stimulate the informal use of the public interior space.

Image top: [Interior foyer Hermitage]. (n.d.). [Photograph]. De Ploeg Projectmarkt. https://deploeg.com/projectmarkt/nl/portfolio/entertainment/hermitage-amsterdam/

Personal experience



Use of Hermitage by visitors

Observations

I visited the site during a period with limitations related to Covid-19. Therefore, visitors had to scan their QR-code before entering the foyer, a limited number of visitors was allowed and tickets had to be reserved before the museum visit. This influences the use of the public interior already before even visiting, but also minimizes the chance of using the foyer as public routing. All people that entered the museum were therefore paying visitors for the exhibition, leaving out the change of spontaneous and informal use of the public interior space and cafe. I questioned employees of the info desk about the public use of the building. They also mentioned that in situation without limitations, the informal use of the interior public space, people using the foyer as routing or people visiting the restaurant without visiting the exhibitions is minimal despite the opportunities are present. Maybe the qualities are not used in the optimal way. The foyer is mainly used as meeting spot for people who visit the museum. The courtyard however has a more informal use, while people use it to sit and during summer a bar is located in the garden so people can enjoy a drink and sit in the garden.

Blokhuispoort | Leeuwarden

Project information

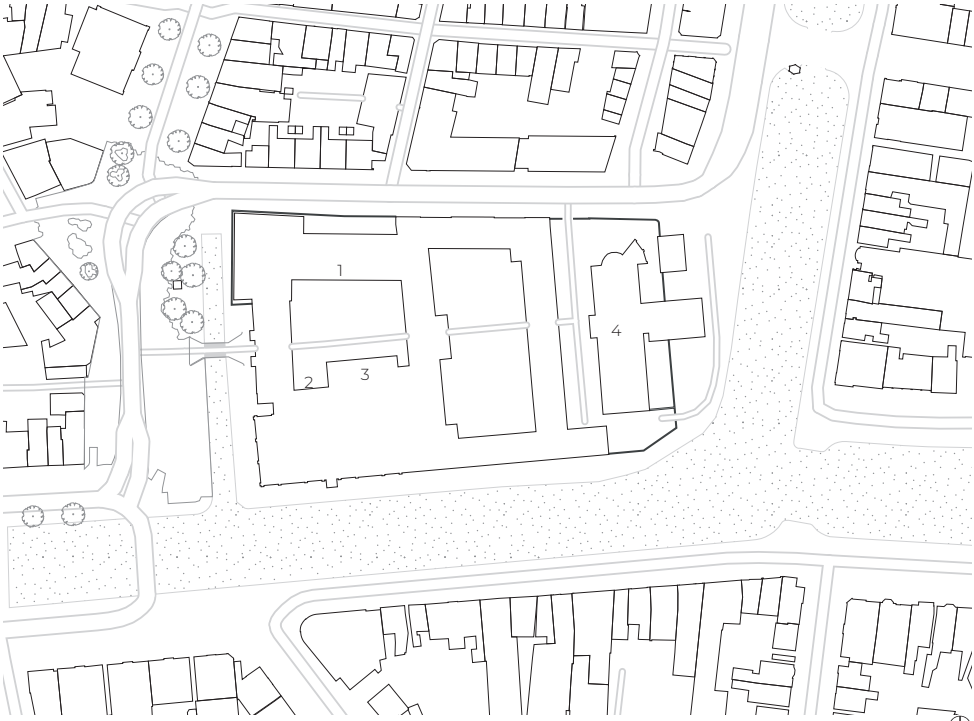
Location:	Leeuwarden
Former program:	Part of fortification and prison
New Program:	Cultural meeting function
Use:	Library, cafe, restaurant, education, shops, offices and hostel
Architect:	TWA Architecten and Kwint Architecten
Completed:	2017
Floor area:	15.500 m^2

From prison to cultural meeting spot

The Blokhuispoort has always played an important role in the long history of Leeuwarden. Originally intended as part of the fortification of the capital of Friesland, but since 1560 the building has been used as prison. The current complex was built between 1870 and 1895.
The first buildings on the site date back to 1499. It was a so called forced fortress (dwangburcht), from which the rebellious population of the newly conquered area was kept under control. In the centuries that followed, the Blokhuispoort served as a prison. The design of the building in its current form dates back to 1870. In that year, the constructions of the plans that architect J.F. Metzelaar had drawn started. The prison closed its doors in 2008. Temporary rental to small companies ensured that the complex did not become vacant. In 2014, BOEi bought the Blokhuispoort with the aim of developing a cultural meeting point. The main challenge of this building was to make a closed and monumental complex public. A place that has been cut of from the city for a long time. The seclusion must be preserved, but there must also be insight into what is currently going on within the walls. The intervention for this building therefore goes further than just the building (TWA Architecten, n.d.).

Image: Van Beek, G. (z.d.). Blokhuispoort [Photograph]. TWA Architecten. https://www.twa-architecten.nl/projecten/blokhuispoort/

Transformation and addition



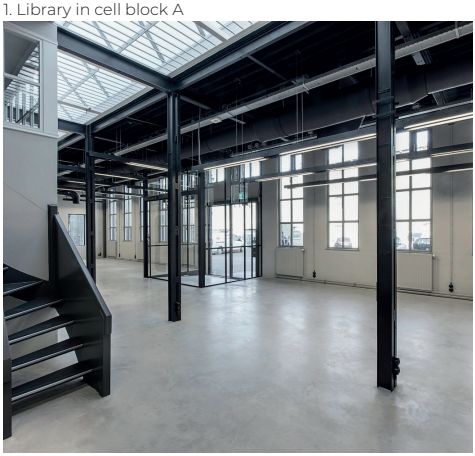
Location of images

Architecturally, the chosen goal was to preserve as much as possible, to make the new additions and adjustments clear and to leave the traces of previous adjustments and architects visible, even the very recent ones. A number of powerful interventions have been applied to facilitate new functions and the openness necessary for some users while maintaining the character and scale of the complex and thereby avoiding many minor interventions. The house style for the transformations gives the different building parts a common identity. In this way, the unity and utilitarian character has been preserved.

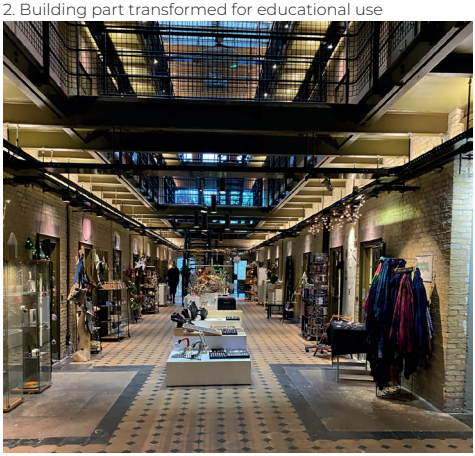
Cell block H has been completely renovated after a thorough historical research. New interventions are carried out as minimal as possible and very tightly detailed in black steel and glass. The use of these new materials tell where the adjustments have been made. Thanks to the extensive restoration, there was room a major intervention in cell block A. A library requires an open and approachable building and thanks to an

1. Library in cell block A

2. Building part transformed for educational use



3. Former forge



4. Shops and hostel in former cell block H

impressive breakthrough, filled with glass and steel, the cell block has acquired the desired transparency without compromising the appearance of the Blokhuispoort. A couple of years ago, part of the prison wall collapsed. It has been left in that way, to achieve more transparency and as part of the story. In addition, new technologies have been added, such as a large biomass heating installation that runs on pruning waste from the municipality of Leeuwarden. The story of the Blokhuispoort has been leading. It was important to not only tell the story of the building, but also to add a new chapter to it. The main topic in this chapter is opening up the complex. According to the architects, it can already been seen that the desired goal is achieved, while there is liveliness within the prison walls, but also beyond. The redesignation gives an impulse to the eastern city center and the Blokhuispoort has really become a meeting place (TWA Architecten, n.d.).

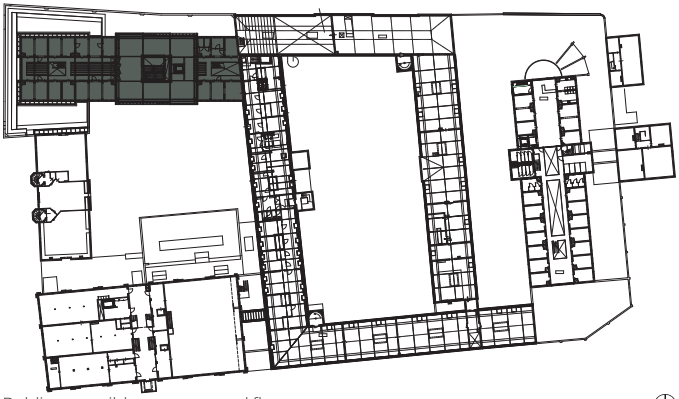
Image 1+2: Van Beek, G. (n.d.-a). Blokhuispoort [Photograph]. TWA Architecten. https://www.twa-architecten.nl/projecten/blokhuispoort/
Image 3: Van Beek, G. (n.d.-b). De Smederij [Photograph]. TWA Architecten. https://www.twa-architecten.nl/projecten/blokhuispoort-smederij/

Public accessible space

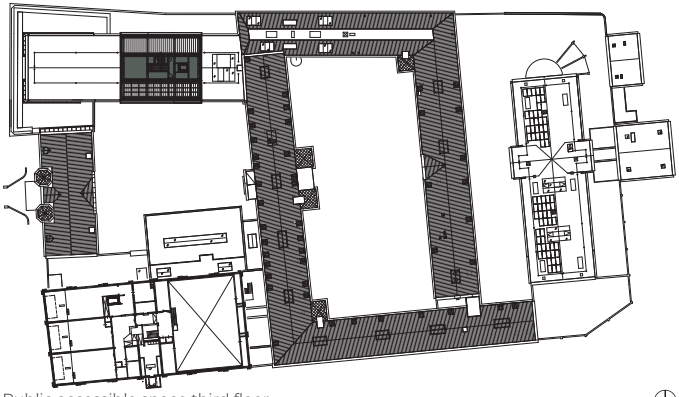
Public accessible space ground floor

The public accessible space of the Blokhuispoort is spread out both in a horizontal and vertical way. Meaning that the public interior spaces are divided over several areas in the floorplan of the entire building and spread over multiple levels. Despite the division in two direction, the public accessible spaces are mostly located on the ground floor level. In only one building volume, the public interior space covers all levels of the volume, including the roof that can be accessed. It is not possible to reach all interior spaces through the interior of the building, but all spaces are connected to the multiple enclosed courtyards. These courtyards could also be considered as part of the public interior, despite they are missing one of the important physical characteristics of public interiors, the roof. However, the courtyards are still part of the privately owned plot and completely surrounded by buildings and thereby have an enclosed feeling anyways. Therefore, the definition of public interiors is still for the biggest part applicable to these spaces, also taking into account the informal use of the courtyards.

Public accessible space first floor

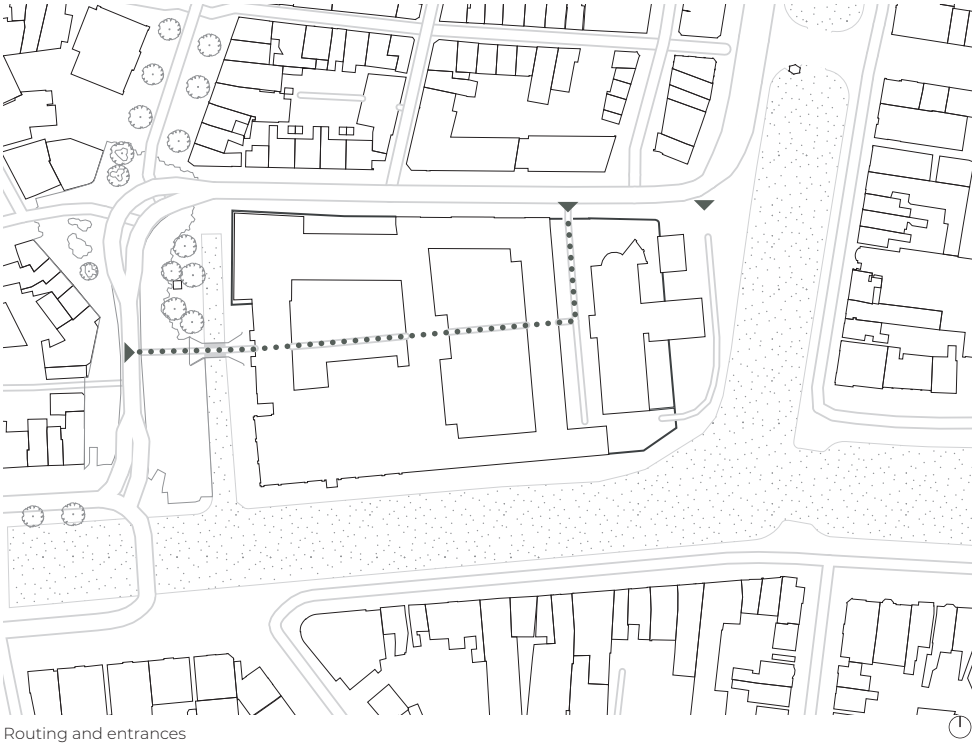


Public accessible space second floor



Public accessible space third floor

Embedding in the city



Routing and entrances

Routing and entrances

The Blokhuispoort is located in a corner of the historic city center of Leeuwarden along the Zuider Stadsgracht and Ooster Stadsgracht. the A total of three entrances provide access to the urban block and functions of the Blokhuispoort. The most right entrance in the plan is an entrance to a private area on the plot. The other two entrances create a routing through the building connecting Blokhuisplein and Nieuweweg with the Keizersgracht and Oosterkade. The redevelopment of the Blokhuispoort into a mixed-use builing with cultural facilities gives an impulse to the eastern part of the city center.

Main entrance

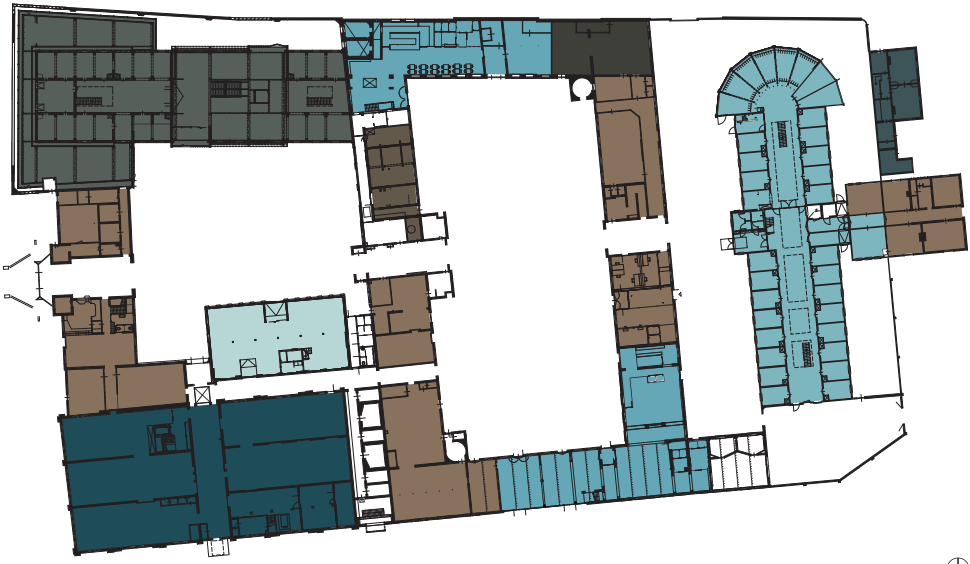
Secondary entrance

Private entrance

Entrances Blokhuispoort

The entrances to the building complex show a clear hierarchy. The existing gate building is still used as the main entrance to the Blokhuispoort. This entrance also faces the city center side, which is the direction from which most visitors approach the building. The second entrance is therefore maybe more used as an exit than an actual entrance for visitors that are not yet familiar with the building. Both entrances can be closed off with a gate. The third entrance is just a private road running in between the building and the Ooster Stadsgracht. The connections to the plot make use of already existing elements such as the prominent gate building defining a clear entrance to the complex.

Assembling of functions

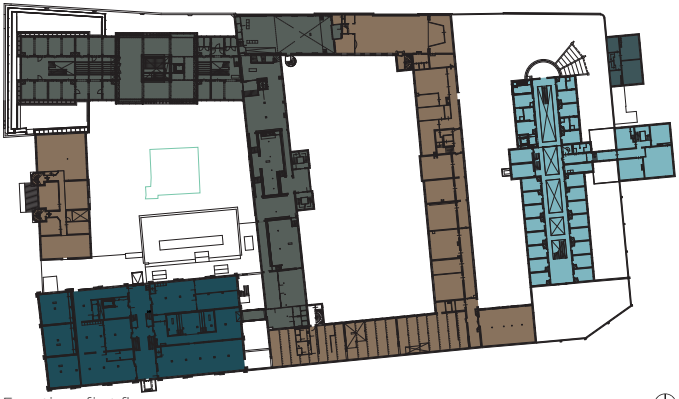


Functions ground floor

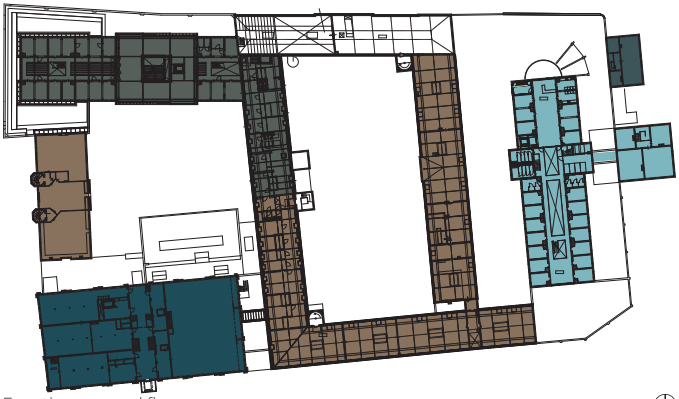
Mixed-use

In the Blokhuispoort, functions are mixed in both a horizontal and vertical way, meaning that functions are mixed on both on one floor level, but also on the multiple levels of a volume. The various building volumes are still recognizable and used as guidelines in the assembling of the functions. The library for example is mainly situated in the volume in the left top corner, however on the first and second floor, the function extends into the middle wing. The volume in the left bottom corner is almost completely used for education on all floors, however, multiple schools are located within the volume, still creating a mix of uses. Two restaurants are located on the ground floor level. The free standing cell block on the right houses shops and art studios and a couple of museum cells on the ground floor and a hostel on the two floors above. The biggest part of the companies located in the Blokhuispoort can be considered part of creative industries.

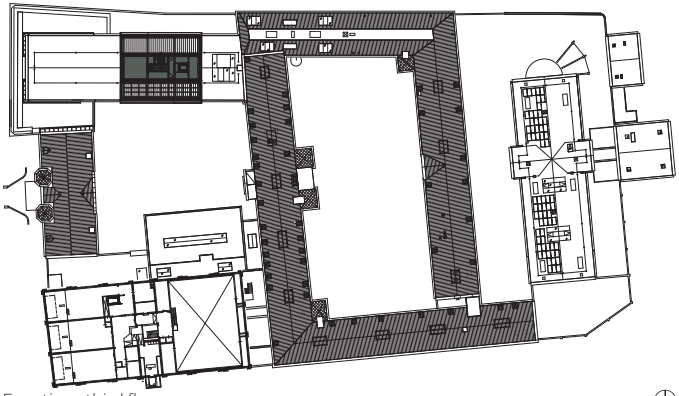
Library
Housing
Workshops
Cafe
Shops
Companies
Education
Storage
Biomass installation



Functions first floor

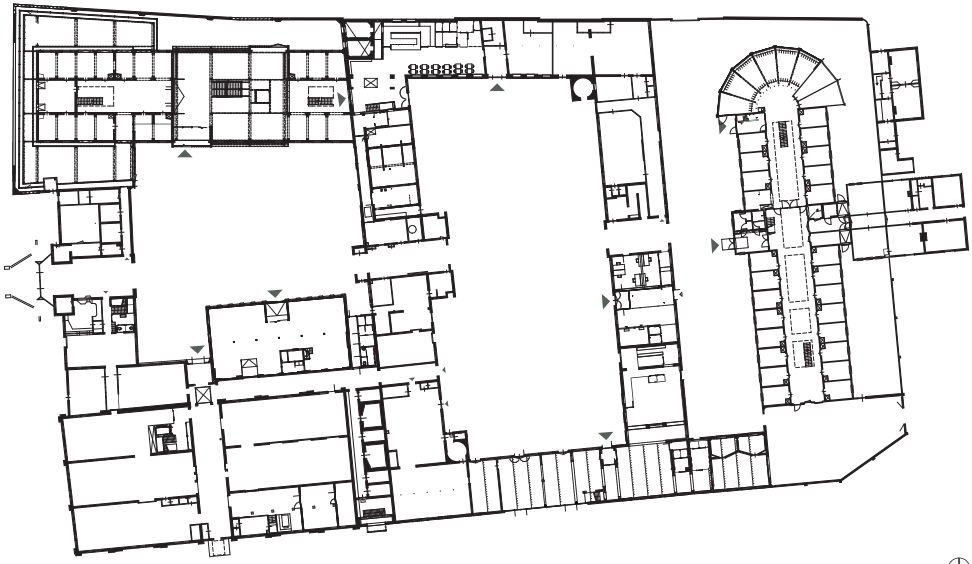


Functions second floor



Functions third floor

Entrances



Location of entrances to functions

Entrances functions

The entrances to the various entrances of the Blokhuispoort are assembled on the interior side of the complex. So two entrances provide access to the enclosed courtyards and all other functions can be entered from the two courtyards. The restaurant in the top volume can be accessed from the courtyard, but also connects on the interior to the library and can be accessed from this function. The art studios with shops in the volume on the right and hostel on the floors above make use of the same entrance. Some other functions are connected as well, the educational building is for example connected to the library on the first floor via a bridge. On the second floor, the office space of the library in the middle wing connects to the office spaces of other companies. Similar, the educational functions on the ground floor connect with office spaces in the volume next to it. Assembling the entrances of various functions on the courtyards stimulates the social interaction between various users of the building, stimulates the use of the public space and thereby stimulates the possibility of encounters and meetings.

1. Library entrance

2. Entrance educational building

3. Entrances in former forge

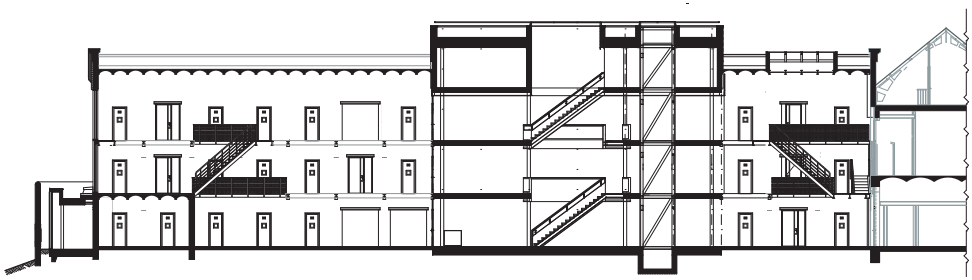
4. Entrance shops and hostel

Design of entrances

The design of the entrances is a big part of the interventions for the Blokhuispart, while they add to the openness of the building, which was needed for the public and cultural functions. The entrance to former cell block H is the most subtle, with a single glass and steel door with canopy. The entrance to the educational volume and former forge are slightly bigger with more glass already creating more openness. Major interventions however have been done to open up the volume for the library, with a big curtain walls on two sides of the volume also including the entrance on the side of the courtyard. The new entrances and other interventions are clearly visible due to the use of steel and glass. The material use for all interventions creates a unity between the various volumes of the complex.

Images: Van Beek, G. (n.d.-a). Blokhuispoort [Photograph]. TWA Architecten. https://www.twa-architecten.nl/projecten/blokhuispoort/

Atrium & Void



Section library (Block A)

New central staircase

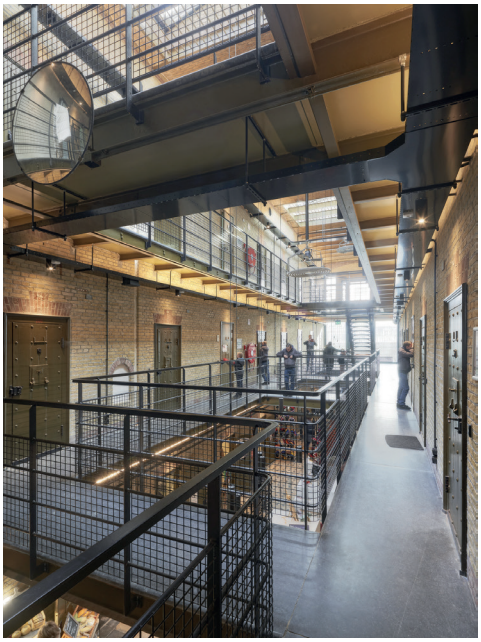
Existing void in library

Existing and new voids

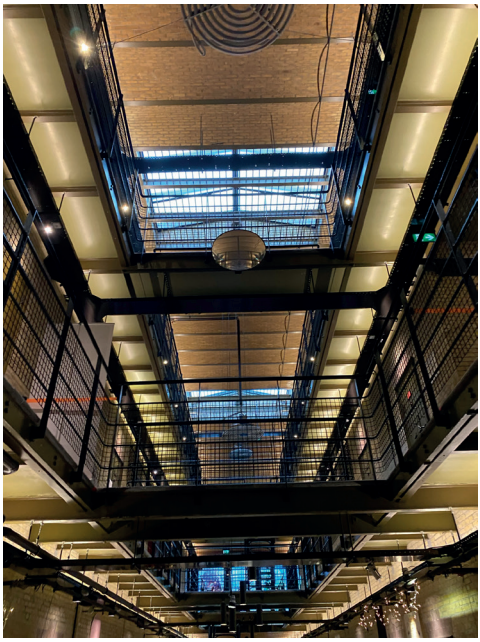
A big part of the volume of the library has been replaced with a open volume with curtain walls on two sides. Part of this intervention is the central void with staircase on the interior visible in the middle of the highest volume in the section. As visible in the left image, the void connects the floors of the library both physically and visually. The staircase even connects to the public accessible roof terrace. A glass roof is added on top, however most space in the void is occupied by the stairs, so not much light reaches the ground floor through this void. The original layout of the cells can still be seen on the parts on the left and right in the of the library volume and in the other section of the other cell block. These cell wings make use of a central void with galleries and

Image left: Van Beek, G. (n.d.-a). Blokhuispoort [Photograph]. TWA Architecten. https://www.twa-architecten.nl/projecten/blokhuispoort/

Section shops and hostel (Block H)



Existing void in shops (block H)

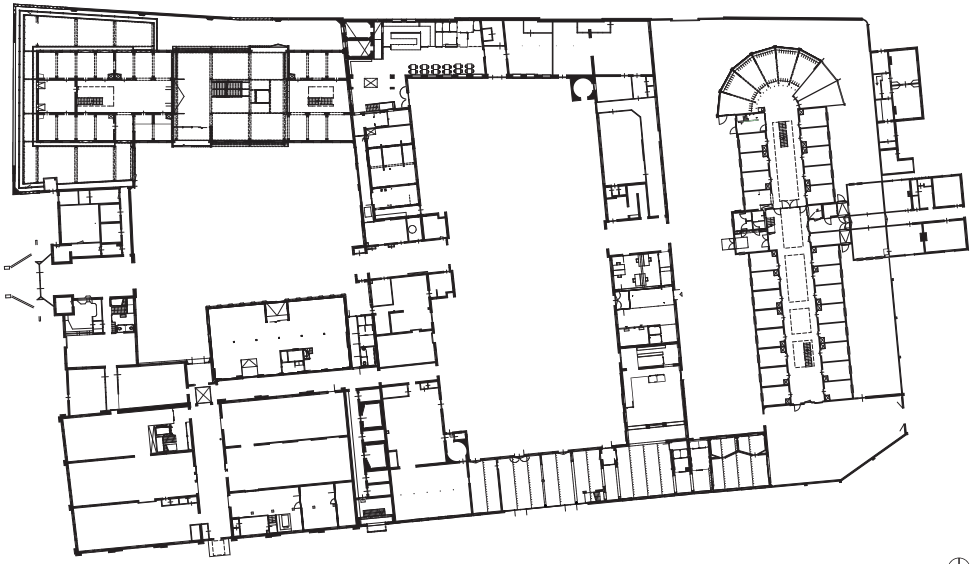


Existing void in shops (block H)

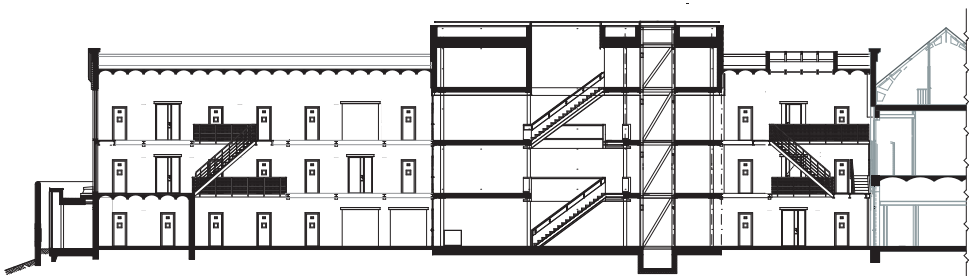
cells on both sides. This layout is maintained during the transformation, which together with the roof windows creates voids in the these parts as well and connects the various floors visually. Also in the case of the Blokhuispoort, the multiple courtyards serve as atriums for the buildings as central open spaces.

Image left: Van Beek, G. (n.d.-a). Blokhuispoort [Photograph]. TWA Architecten. https://www.twa-architecten.nl/projecten/blokhuispoort/

Daylight



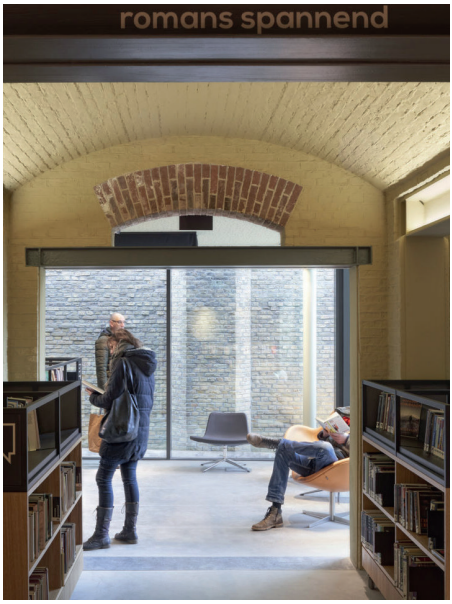
Ground floor



Section over library

Opening up

Next to the visual and physical connection, the voids also improve the amount of daylight entering the building. In the library part, additional interventions improve this even more. On the ground floor a volume is added on the exterior of the top left corner of the Blokhuispoort and visible in the section as small added volume on the left. The wall of the volume are almost completely made in glass. A glass strip along the existing facade connects the old building to the new addition as visible in the second photo. This volume is added in between the existing building and wall. Therefore this volume adds to the openness and incoming light without interfering with the enclosed feeling of the building both from the exterior and interior.



New opening is existing wall

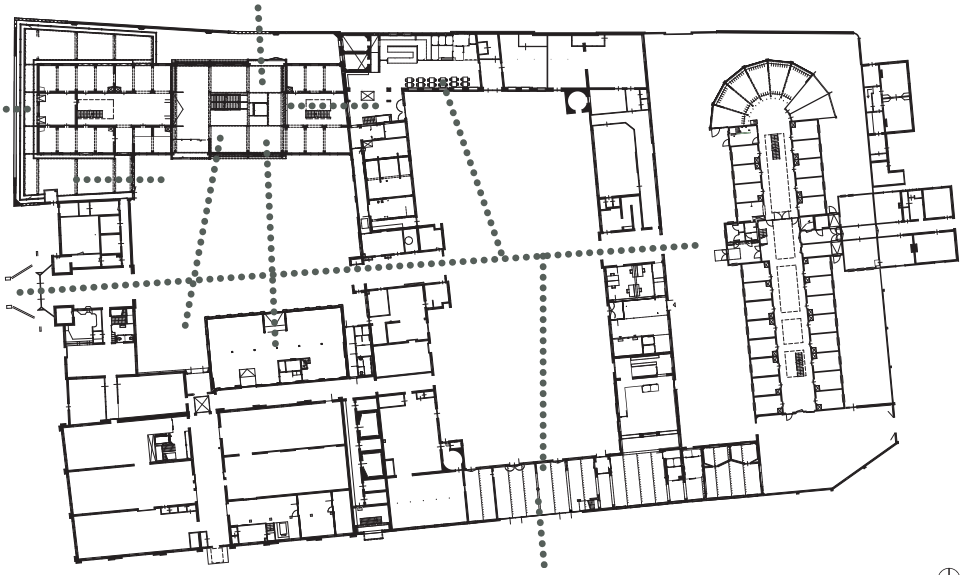
Added volume of library

Replacement of existing windows

Interventions to open up for library

Image top left: Van Beek, G. (n.d.-a). Blokhuispoort [Photograph]. TWA Architecten. https://www.twa-architecten.nl/projecten/blokhuispoort/

Visual connections



Visual connections ground floor

Opening up

By opening up the various building volumes, new sightlines are created both to the surrounding and on the interior of the block. In the past, part of the wall of the Blokhuispoort collapsed. This is left in that way, while it adds to the story of the builing, but also creates more openness and a sightline between the library and surrounding as visible in the first photo. The wall next to the new library volume is opened up in two more positions as visible in the second photo. This opening up is very recognizable as intervention, but very subtle, while it is only possible to catch a glimpse of the interior form some angles and the wall seems closed form other points of view. The curtain walls of the new central library volume create new sightlines to both the exterior and interior. Both books and working spaces are located along the facade, so both the function with books and people can be seen from the surrounding and courtyard. The courtyards also provide openness and sightlines between the various volumes, functions and the public routing. It is possible to see people working, walking or sitting in other parts of the building, which also adds to the openness.

Also on the interior visual connections are created to various parts of one function with glass separations. The cell doors are placed in an open position and glass doors and windows are put in place to create a connection between the meeting and working spaces in the cells and the library. Additional glass strips in the floors creates even more connections between the various floors besides the voids.

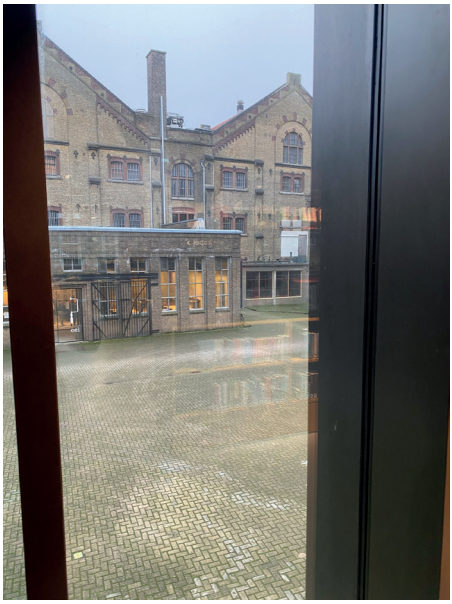
Visual connection as result of collapsed wall

Openings is wall creates small views to inside

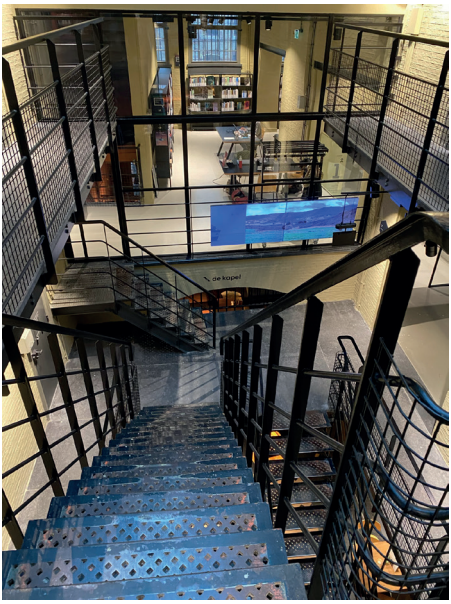
Intervention in facade of library

New visual connection with cafe

Image top left: Van Beek, G. (n.d.-a). Blokhuispoort [Photograph]. TWA Architecten. https://www.twa-architecten.nl/projecten/blokhuispoort/



Visual connection to various parts of the building



Visual connection in library

Glass strips in floor

New glass doors and windows in cell doors

Materials

Pavement in second courtyard

Polished concrete floor finish in added part of library

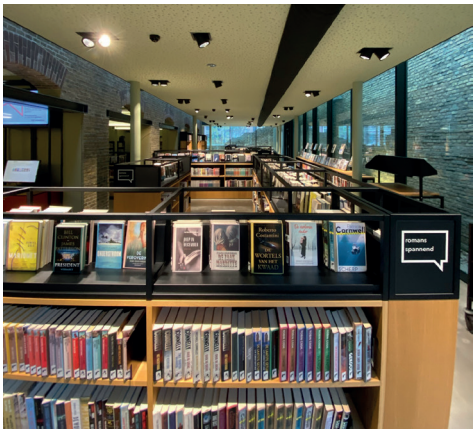
Large stone tiling finish in circulation space of library

Stone tiling finish in shops

Variety of materials

A variety in materials can be recognized in the exterior and interior spaces and functions. The pavement of the multiple courtyards differs between the courtyards and differs from the pavement used outside the block. Thereby, various spaces are created, enhanced by the entrances and middle wing with gate, within the complex. On the interior, hard floor finishes are visible with the large tiles in the library and smaller tiles in the cell block with shops. The polished concrete has a slightly softer appearance than the tiles. The materials of the intervention can be clearly distinguished from the existing building.

Interior design



Added volume of library


Childrens area in library


Study area in library


Library cafe

Integrated interior design

The interior is clearly integrated in the design, which is mainly visible in the library. The materials used for the bookshelves matches with the materials used for the interventions of the transformation due to the use of black steel. On the interior, various spaces are designed for specific target groups, themes or use for example by the use of color visible in the area for children or the blue in the third photo indicating a working area with computers.

Image bottom right: Van Beek, G. (n.d.-a). Blokhuispoort [Photograph]. TWA Architecten. https://www.twa-architecten.nl/projecten/blokhuispoort/

Personal experience

Location visit

I visited the Blokhuispoort during a weekend and some functions, such as the educational functions and spaces for businesses were closed. This also decreased the amount of users of the public spaces. Still plenty of people visited the Blokhuispoort, walked through the courtyards, visited the shops and art studios and restaurants. On the ground floor of the library, close to the entrance, visitors were sitting at a table with newspapers and magazines reading or having a chat. In the central volume all working spaces were full, but in other areas there were places available. When I left early in the afternoon, almost all working spaces in the library were occupied. One of the restaurants connects directly to the library. Currently the sitting space of the restaurant / cafe even extends into the library volume resulting in library users and additional visitors sitting down for a break from working with coffee or lunch. Employees of the library told me that the function of the library is shifting and is currently only for 50 percent about the books. Other functions relate meeting and working and to education for all target groups, with a makers space for children, workshops and lectures for adults and an information point in case elderly have technical problems.

Neherpark | Leidschendam

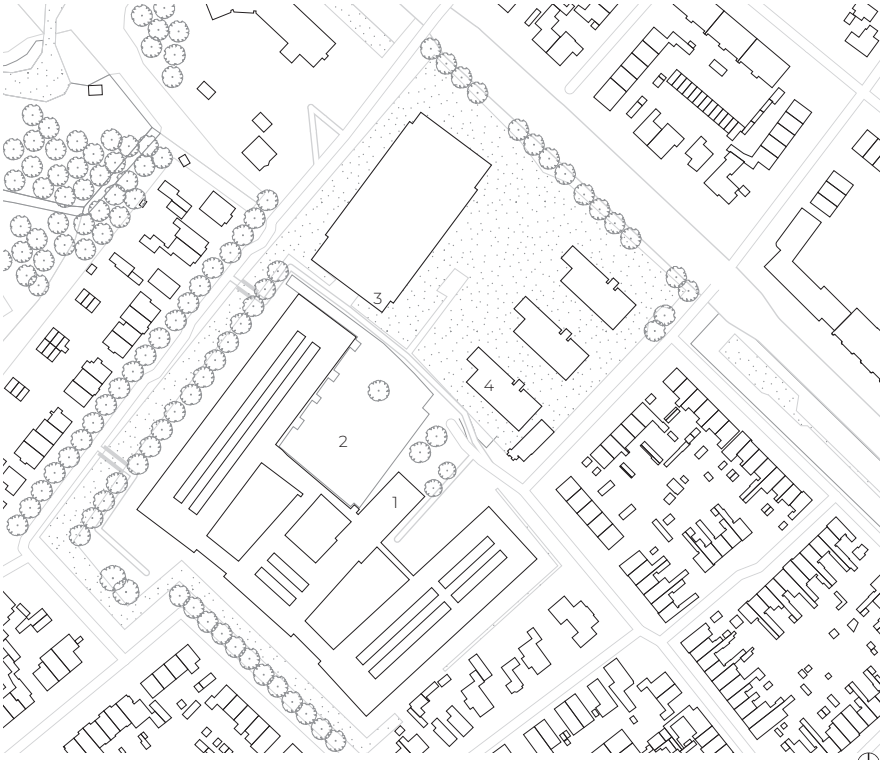
Project information

Location:	Leidschendam
Former program:	Laboratory of the PTT
New Program:	Housing with communal functions
Use:	Housing, restaurant, pool, gym and lounge
Architect:	Enjoy Building and Van Heerden & Partners
Completed:	2009
Floor area:	14.000 (monumental part)

From laboratories to housing

The dr. Neher laboratory in Liedschendam was opened in 1955 as the central research institute for the PTT. The building designed by architect Samuel van Embden exudes the optimism for progress of the reconstruction in everything. The laboratories have recently been converted in separate parts and the own main building is redesigned with communal functions. The demolition of the later extensions restores the image from the fifties and creates space for new constructions.
The building is a document to Lambertus Neher, director-general of the PTT and for some time also Minister of Housing and Reconstruction after the war. One of the first Dutch computers was developed in the laboratory, the so called Zebra, but later also more modern inventions such as video telephone and SMS.
In September 2001, KPN Vastgoed applied for a permit to demolish the Neherlaboratorium and replace it with new construction. However, the municipality wanted to keep the complex as monument and commissioned a study for a new use. The building turned out the be suitable for a combination of housing and care. After a competition with four combinations of project developers with architects, one proposal is selected and KPN later sold the complex to this developer.
In the design of van Heerden & Partners, the laboratories are converted into appartements and the specific main building houses the general communal functions. The demolition of later extensions did not only restore the original image of the building, but also created space for the construction of 96 new luxury appartments. The location of the new buildings restored the view of the main building from a continuous route. In 2007, the building was listed in the top 100 of reconstruction monuments and in 2010 the building was officially listed as a monument (ArchitectuurNL, 2018).

Transformation and addition



Location of images

In the original design, the complex consisted of two rectangular laboratory halls, a workshop and a management building. The three workspaces are arranged in a U-shape around the main building. The buildings are interconnected by corridors and footbridges. The laboratory halls, which are 20 meters wide and six meters high, are surrounded by two layers of offices on both sides.
These offices form the basis of 83 new apartments which are accessible from the central zone, where the apartments on the first floor have their outdoor space as well. In fact, only the concrete trusses in the middle zone remain of the halls. A new gallery that runs freely between the houses has been hung from this structure.

The building consist of a poured in-situ shell with prefab elements: sandblasted Schokbeton facade panels, eaves and frames filled with steel windows. Due to the residential function, new and clearly deviating aluminum folding walls have been installed.

The striking concrete entrance portals with characteristic honeycomb skylights have retained their original function and a number of original concrete spiral staircases have been maintained.
The 'levensloopbestendige' apartments vary in size from 70 to 180 square meters and a nurse can be called up at the push of a button.

A large underground parking garage has been constructed under the new buildings and between the existing building. The elongated block of the new-build

1. Main building

2. Former laboratory halls

3. Addition of lofts

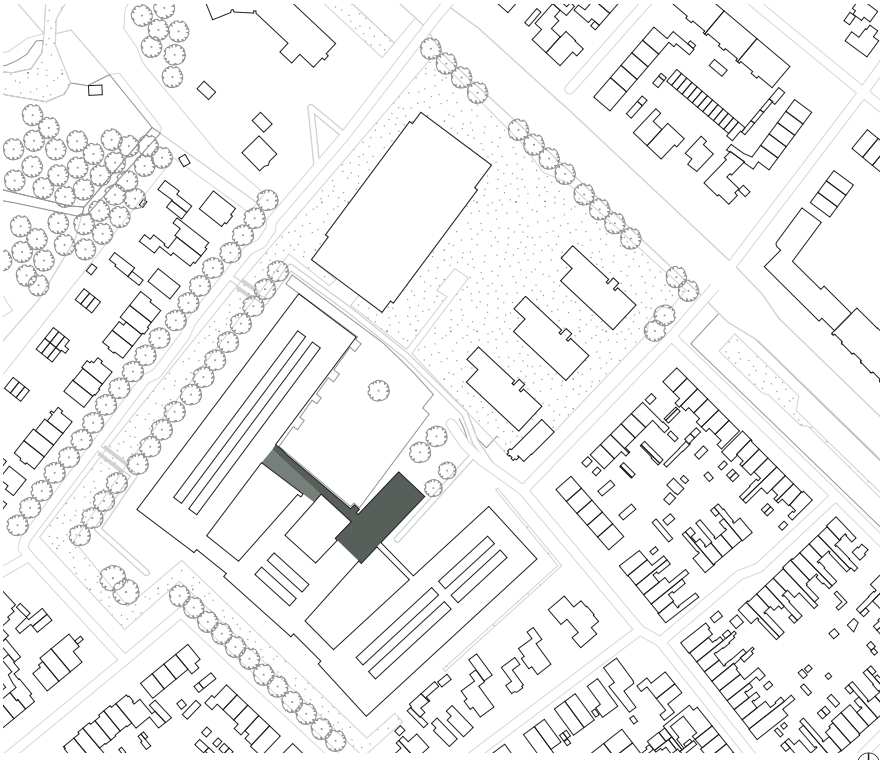
4. Added urban villas

apartments resembles to the rest thanks to a similar layout with a central zone with lifts and galleries. The apartments on the other side of the water feature are housed in three urban villas in a way to retain the sightlines from the surrounding area. These are also lower where they connect to the existing residential buildings. Inner gardens and public green spaces are collectively owned and maintained. The girth, functioning as a partition around the entire complex has been maintained. However, the site is now public and there are various bridges and walking routes connecting to the immediate vicinity (ArchitectuurNL, 2018).

As apparently easy it was to give a good interpretation to the workshops, it turned out to be difficult to find a new function for the main building. A number of collective general care functions within the residential complex are located in this building; a fitness room with swimming pool and sauna and a number of practice room for doctors, pedicures and physiotherapy. An independent operating restaurant with terrace in one of the courtyard gardens occupies the ground floor. Linked to this is the communal space for the residents. (Enjoy Building, 2020)

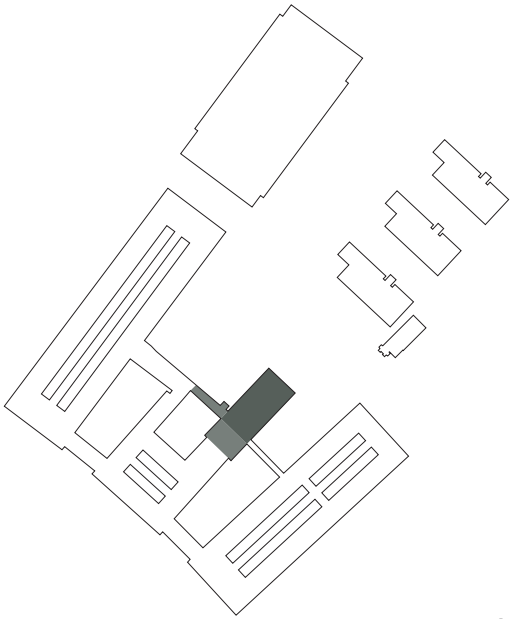
The former auditorium is being restored to its former glory. The office areas above the entrance of the main building are transformed into luxurious marionettes Only for the striking 52 meter high tower, originally intended for the high arrangement of instruments, no function has been found yet.

Public accessible space

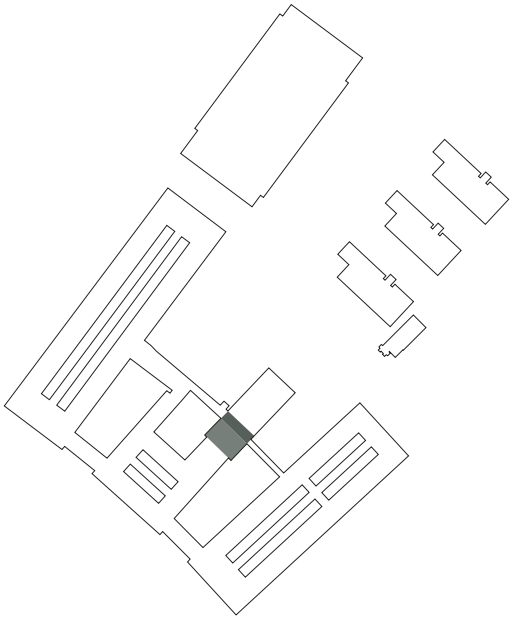


Public accessible space ground floor

The public accessible space is only located in the main building of the former Neherlaboratorium. The dark color indicates the actual public accessible space for people who do not live in the Neherpark. The public accessible space is spread over three floors and reduces in size on each floor. The lighter color indicates the collective functions for the inhabitants of the building, but are in some cases also accessible for external people. Those spaces are taken into account while they improve the social interaction both within the complex and with the people in the area. The outdoors space could also be considered part of the public accessible space, while it belongs to the complex, but opens op to the public.



Public accessible space first floor



Public accessible space second floor

Embedding in the city

Routing and entrances

Routing and entrances

The Neherpark is located at the corner of the Johann Sebastian Bachlaan and Van Ruysdaellaan and covers an area of several urban blocks compared to the surrounding. On the south side, the houses along the Sint Bonifaciusstraat are built back to back with a volume of the Neherpark. The complete complex is surrounded by water creating a barrier with the surrounding. The water can be crossed in three locations, accessing the Neherpark. The entrance on the left in the map connects to a small parking area in the left corner but does not connect to other parts of the complex. The other entrance on the same street provides access to the plot for pedestrians and cyclists. The third entrance is the main entrance to the Neherpark. Cars can access the parking garage from this entrance. The routing indicated in the drawings is only accessible for pedestrians and cyclists. It connects the various buildings in the Neherpark, but this Van Embdenpad also creates a public routing from the corner of the Sint Paulusstraat and Sint Willibrordusstraat to the Van Ruysdaellaan.

Entrance gate dwellings

Entrance gate dwellings

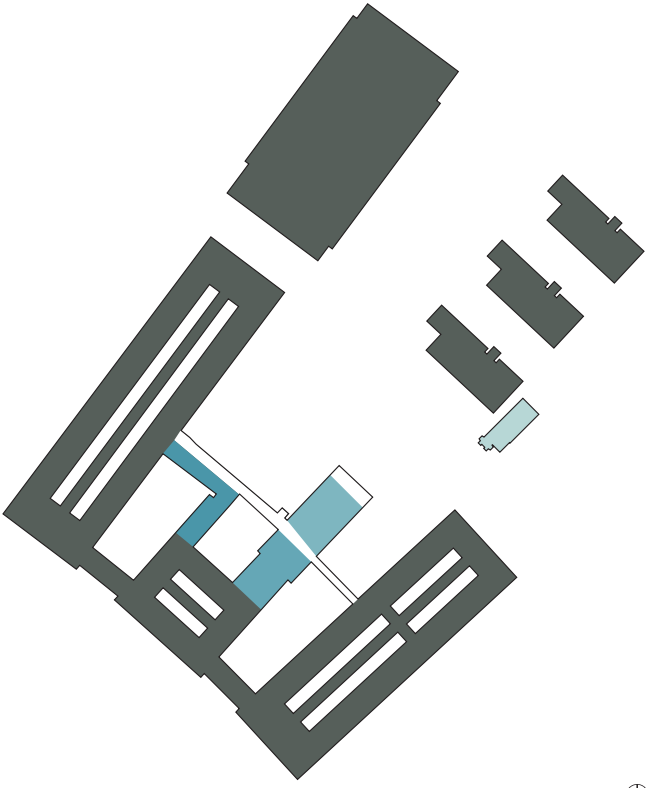
Main entrance gate

Closed off entrance

Entrances Neherpark

The entrance to the complex all work as a bridge over the water and are all designed as gates. The two entrances on the Van Ruysdaellaan are similar to each other. The third entrance is the main entrance to the complex and is also bigger compared to the other two. This entrance also makes use of a gate. A fourth connection to the complex is visible in the last photo. This connection to the Sint Bonifaciusstraat is closed of by a gate along the pavement and a second gate on the edge of plot of the Neherpark.

Assembling of functions

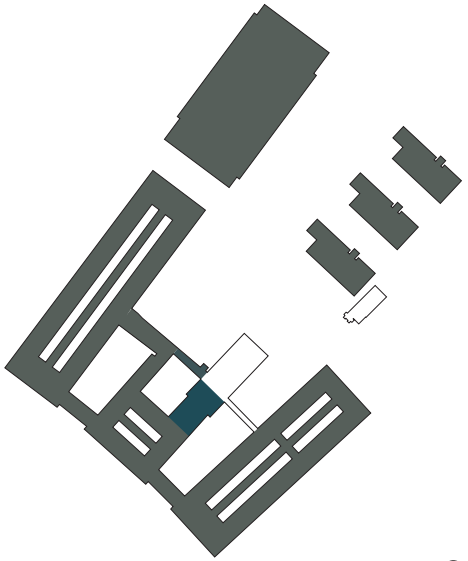


Functions ground floor

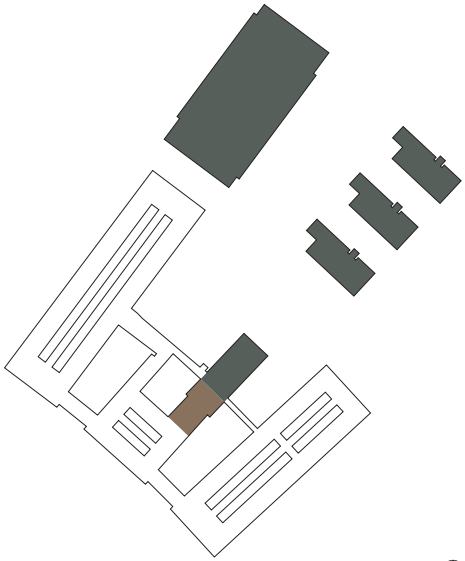
Housing and collective functions

Housing is the main function after the transformation of the Neherlaboratorium. The old work spaces have been transformed into housing and also the new constructions of the urban villas and lofts contain housing on all floors. Within the main volume of the Neherpark, various functions area assembled. The ground floor is designed as entrance area for the housing and connects to the privately owned restaurant. The restaurant also makes use of the small courtyard next to it as outdoor terrace. The other function on the ground floor is the pool with wellness. This can be used for the inhabitants of the Neherpark, but the pool has also been used for swimming lessons. On the first floor a lounge is located that serves as a meeting area for the inhabitants. The blue area indicates the gym. Both people within the complex and external people can get a subscription. On the third floor an auditorium is located. The restaurant is public accessible and is therefore part of the public interior. For the other functions a subscription is needed, or they are only accessible occasionally. Thereby, these spaces are not really part of the public interior. However, they are accessible for all inhabitants of the complex and therefore still stimulate the social interaction between the inhabitants. While external people are also allowed to make use of those functions, the social interaction is even stronger.

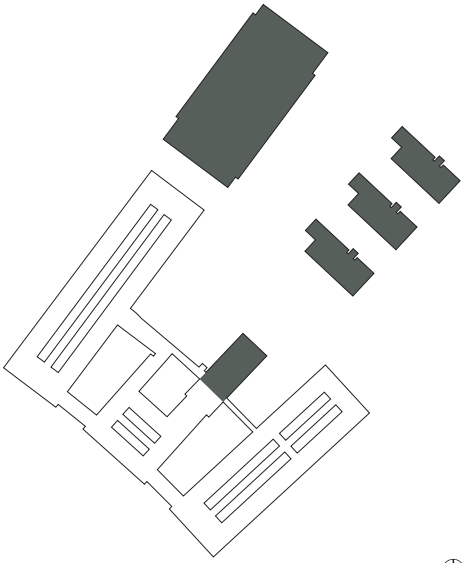
Housing
Gym
Dentist
Cafe
Entrance area
Pool
Lounge
Auditorium



Functions first floor

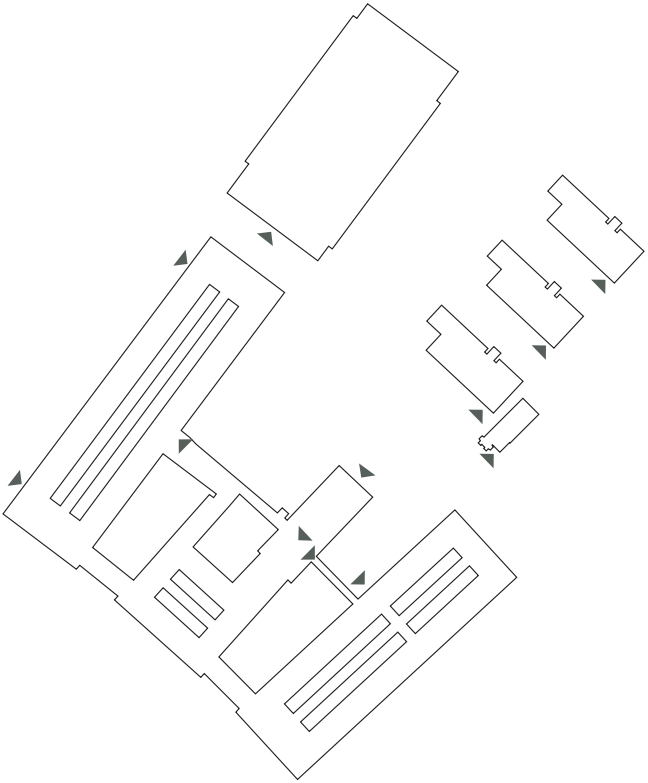


Functions second floor



Functions third floor

Entrances



Location of entrances

Entrances to functions

The existing buildings have combined 4 entrances, 2 for the volume on the west, 1 to the volume on the south and one entrance to the main building. The multiple volumes of the existing building are connected with walking bridges and hallways. Therefore it is possible to reach the various volumes from for example the entrance in the main volume. The other functions are assembled in the main building and have their entrance connected on the interior to the entrance area. So first the main building has to be accessed before the restaurant or auditorium can be accessed. The new volumes all have one central entrance for the whole building connecting to the Van Embdenpad.

Main entrance

Entrance dwellings laboratories

Entrance urban villas

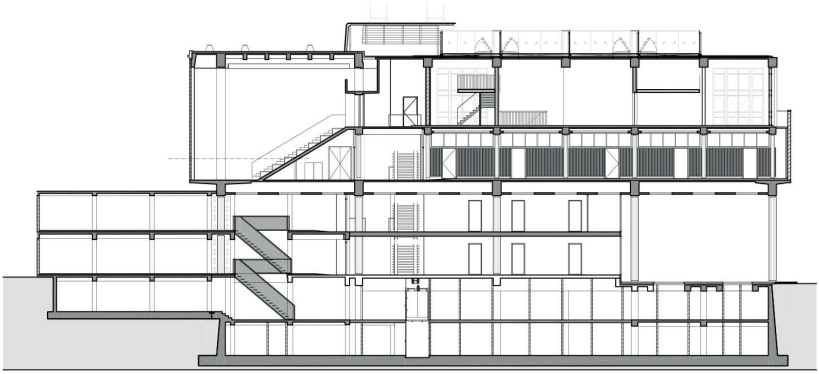
Entranse lofthouse

Design of entrances

For the entrance to the existing volumes, the original entrances have maintained their function. For the laboratory halls, the striking concrete entrance portals with characteristic honeycomb skylights are still used as the entrance. The entrance to the main building is located in the curtain wall under the bigger third floor creating a covered outdoor space. The entrances to the new buildings are designed as open as possible with glass and large sliding doors.

Image bottom right: Schuyffel makelaardij. (n.d.). [Entrance lofthouse] [Photograph]. Schuyffel makelaardij. https://docplayer.nl/172374863-Te-koop-neherpark-zc-leidschendam-benedenwoning-appartement-59m2-vraagprijs-k-k.html

Atrium & Void



Section main building

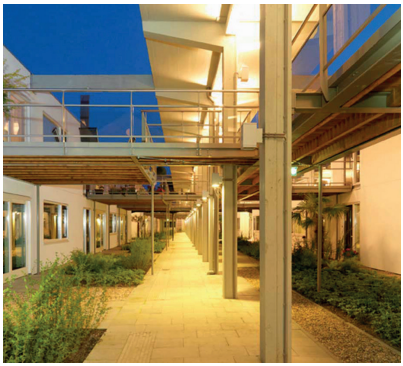
Entrance area main building

Void entrance area

Main building

In the main building, the entrance foyer is a double height space with staircases connecting the ground floor and first floor. This foyer also connects to the restaurant and lounge.

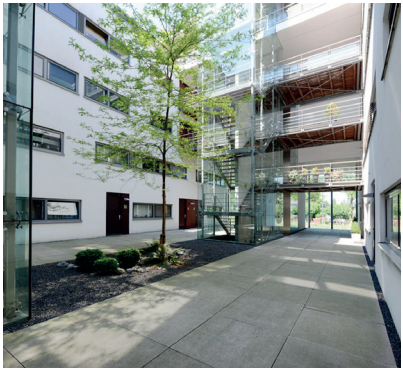
Section: Enjoy Building. (n.d.). Neherpark renovatie [Drawing]. Enjoy Building. https://enjoybuilding.com/portfolio_page/neherpark-nieuwbouw-2/



Opened up laboratories

Opened up laboratories

Courtyard in between building parts



Central open space lofthouse

Housing buildings

In the former laboratory halls, the appartements are created in the former office spaces along the exterior facades of the building. The central zone is left open and serves as circulation space and access to the apartments. The apartments on the first floor also have their outdoor terrace in this open space. Only the concrete trusses of the former building remained in this part of the volume and a new gallery hangs on the structure. The created central open space together with the spatial layout could be considered as atrium for this volume. The elongated block of the new-build apartments resembles to the rest thanks to a similar layout with a central open zone with lifts and galleries. Also the multiple courtyards in between the former work spaces and main building work as voids or atrium.

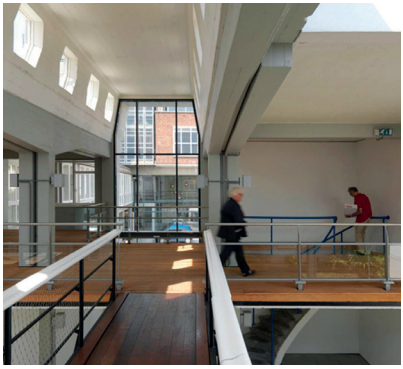
Image top right: Enjoy Building. (n.d.). Neherpark renovatie [Photograph]. Enjoy Building. https://enjoybuilding.com/portfolio_page/neherpark-nieuwbouw-2/
Image bottom left: Enjoy Building. (n.d.). Neherpark renovatie [Photograph]. Enjoy Building. https://enjoybuilding.com/portfolio_page/neherpark-nieuwbouw-2/
Image bottom right: VLK makelaars. (n.d.). [Lofthouse atrium] [Photograph]. VLK makelaars. https://www.vlkmakelaars.nl/neherpark-92-leidschendam-5049354

Daylight

Double height curtain wall

Walking bridges with glass

Opening up the roof lets in light



Glass entrance and honeycomb windows

Existing buildings

The entrance foyer of the main building has a double height with curtain walls on two sides. One is located under the overhang of the second floor, but still plenty of daylight enters the foyer and together with the void creates a large open space. The walking bridges and hallways with windows on both sides create on one hand openness, but also light connections between the various volumes. With the open central space in the former laboratory halls, daylight enters the apartments from two sides. For the incoming daylight, again the existing available emelemtns have been used.

Image bottom left: Enjoy Building. (n.d.). Neherpark renovatie [Photograph]. Enjoy Building. https://enjoybuilding.com/portfolio_page/neherpark-nieuwbouw-2/
Image bottom right: Enjoy Building. (n.d.). Neherpark renovatie [Photograph]. Enjoy Building. https://enjoybuilding.com/portfolio_page/neherpark-nieuwbouw-2/

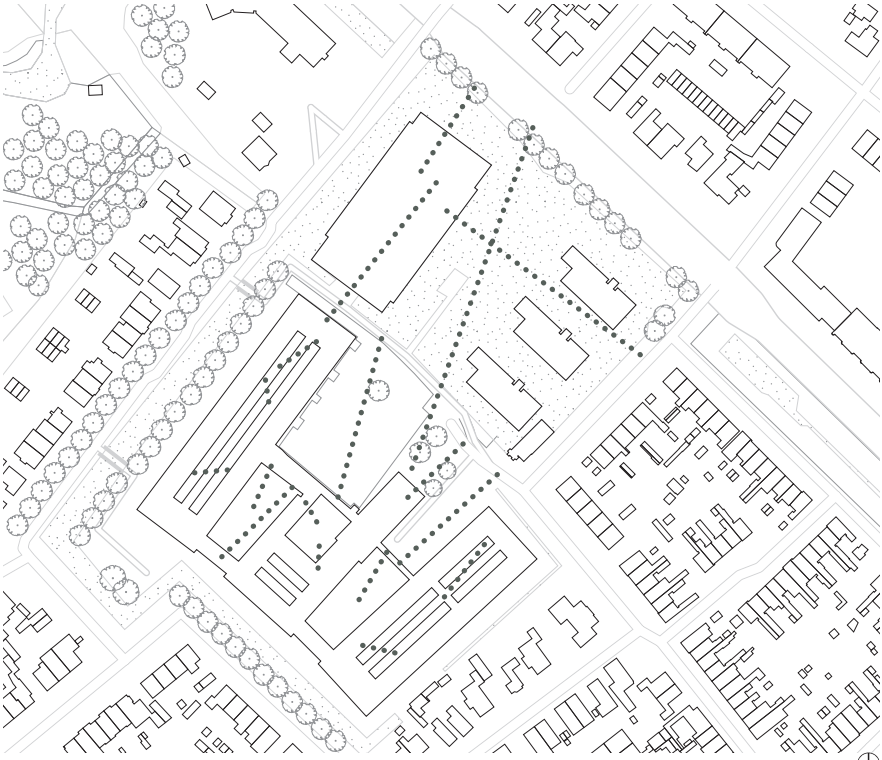
Opening up towards surroundings

Staircase and void with curtain wall

New buildings

The new elongated building uses a similar principle with a central open space. Next to this the two short facades adjacent to this this open space have been opened up with large curtain walls creating even more openness. For the urban villas, curtain walls are positioned over the complete height at the position of the staircase.

Visual connections



Visual connections

External and internal

The new building volumes are positioned in such a way that the new buildings leave enough open space to create sightlines from the surroundings to the monumental building. The open facades in the new building volumes creates sightlines form the surrounding into the building and even completely through the building. The central open spaces in both the existing and new volume, similar to the courtyards creates sightlines between various parts and wings in the building. The use of walking bridges leaves space open underneath to create sightlines to courtyards or other volumes and the bridges themselves create connections between the main building and the laboratory halls.

Visual connection to main building

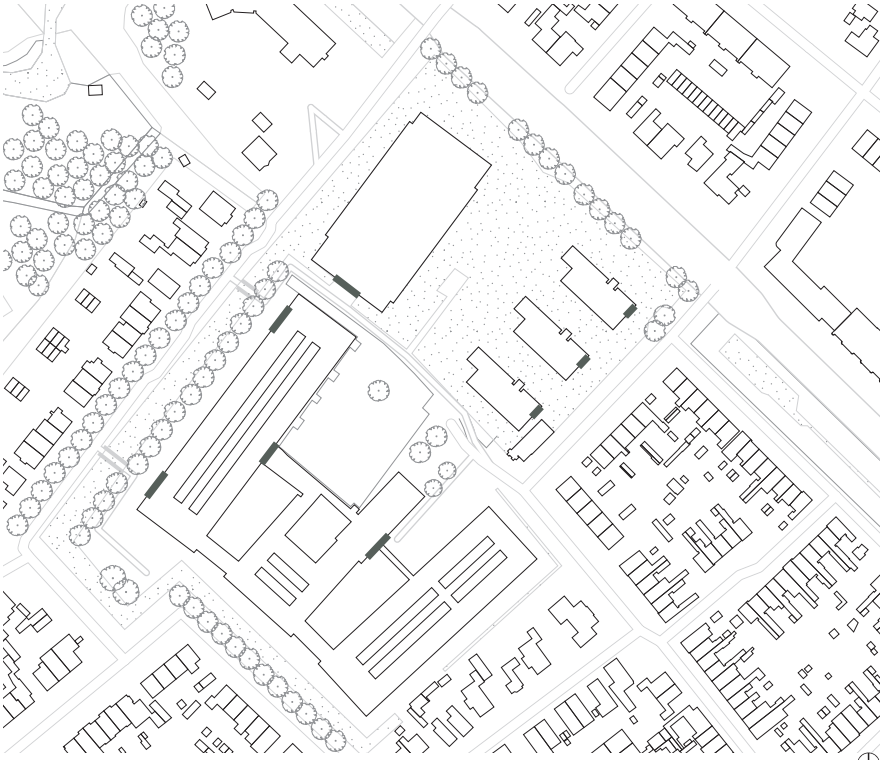
Use of glass allows views to multiple functions

Visual connections to other building part

Opened up laboratory volume allows for more views

Image bottom right: Enjoy Building. (n.d.). Neherpark renovatie [Photograph]. Enjoy Building. https://enjoybuilding.com/portfolio_page/neherpark-nieuwbouw-2/

Security



Location where a key is needed

Keys as security

In the case of the Neherpark, the doors that need a key to open are the borders between the public accessible space and the private space. For most volumes a key is needed directly at the entrance. Only the main building can be accessed without a key. The hallway connecting to the other volume on the left in the map is also accessible without a key, incorporating the hallway connecting to the pool and sauna on the ground floor and the gym on the first floor to the public accessible space.

Locked door to other dwelling part

Locked door to lounge

Locked entrance to dwellings in laboratories

Locked entrance door to lofthouse

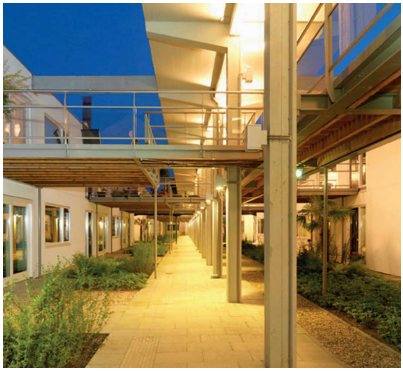
Image bottom right: Schuyffel makelaardij. (n.d.). [Entrance lofthouse] [Photograph]. Schuyffel makelaardij. https://docplayer.nl/172374863-Te-koop-neherpark-zc-leidschendam-benedenwoning-appartement-59m2-vraagprijs-k-k.html

Materials

Pavement on the site

Stone floor finish in entrance area

Stone tile finish in hallway main building



Pavement in laboratory parts

Use of stone and tiles

The floor finishes in the public accessible spaces and collective hallways and galleries are characterized by stone and tiles. The stone and tiles used in the entrance area of the main building connect to the use of materials outside and enhance the public character of the interior space.

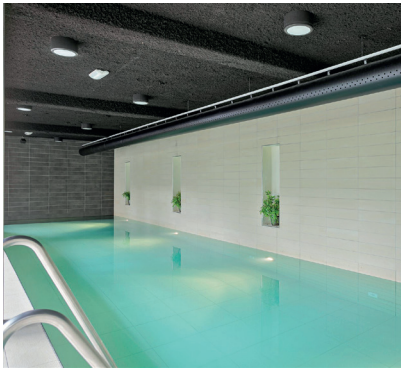
Image bottom right: Enjoy Building. (n.d.). Neherpark renovatie [Photograph]. Enjoy Building. https://enjoybuilding.com/portfolio_page/neherpark-nieuwbouw-2/

Interior

Entrance area main building

Lounge / library

Gym and health care



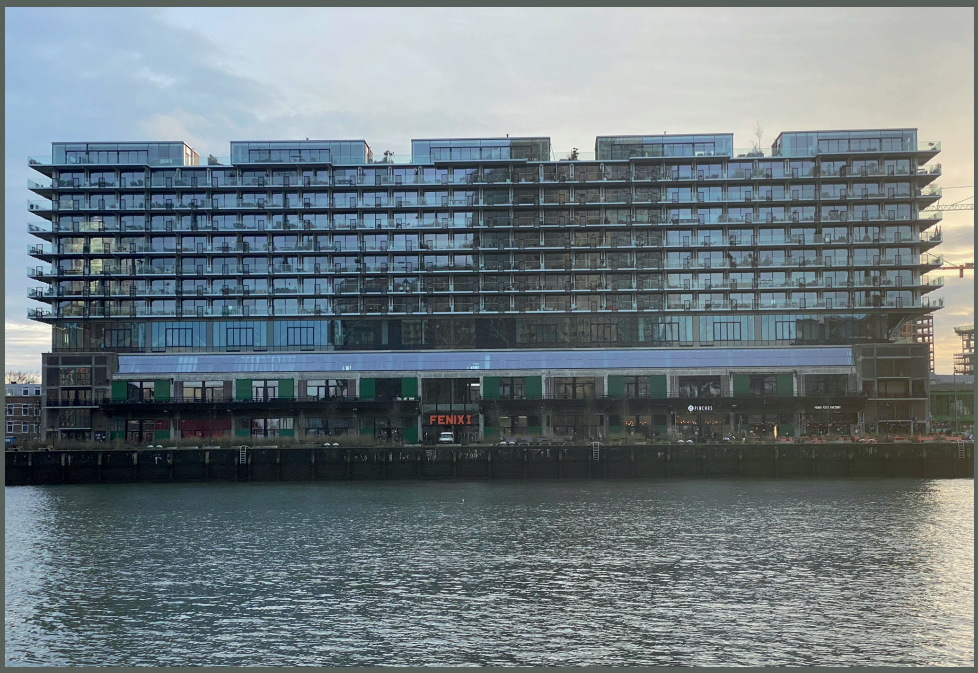
Pool

Collective functions

In the main building, the artificial light is clearly incorporated int the design with the lighting in the ceiling which adds to the public character. The furniture however gives the foyer a sightly more private feeling, while it not integrated in the design of the space, but consist of two sofas and a table placed into the big open space, which makes it not very appealing to sit. The other interior functions provide more opportunities for meetings and spontaneous encounters.

Image top right, bottom left and bottom right: NVM makelaars. (n.d.). [Communal functions Neherpark] [Photograph]. Funda. https://www.funda.nl/koop/leidschendam/appartement-42654542-neherpark-127/

Fenix I | Rotterdam



Project information

Location:	Rotterdam
Former program:	Warehouse
New Program:	Mixed-use
Use:	Housing, offices, cultural and cafe/restaurant
Architect:	Mei architects and planners
Completed:	2019
Floor area:	40.500 m^2

The Fenixloodsen

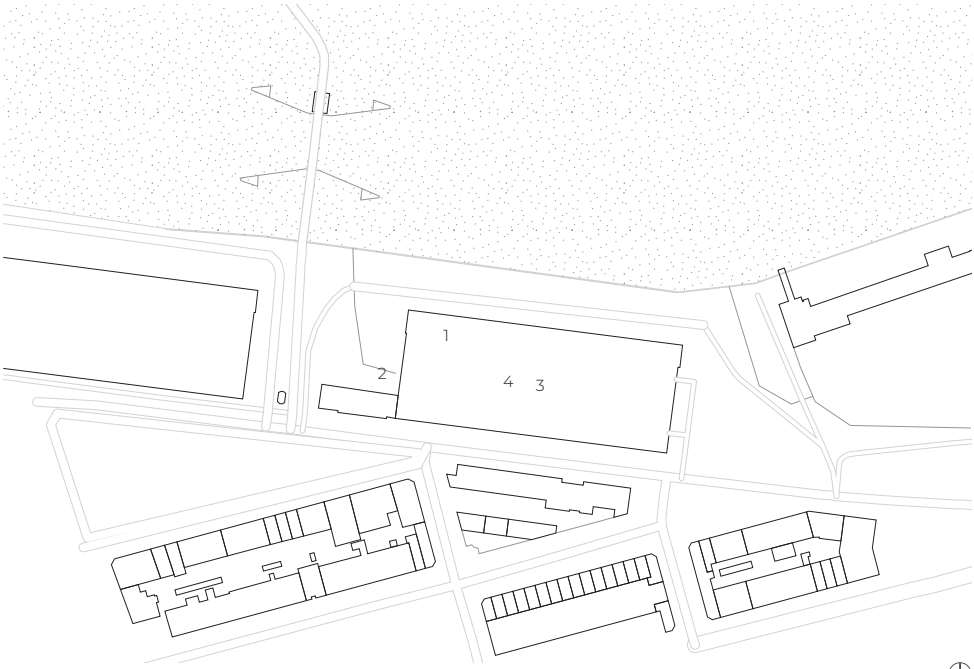
The Fenixloodsen, located opposite of Hotel New York and the Rijnhavenbrug, were built in 1922 related to the significant expansion of the number of lines of the Holland America Line at that time. The warehouse, designed by architect C.N. van Goor, was then called the San Fransisco Loods, and was around 360 meters long, making it the largest transshipment warehouse in the world at the time. The concrete facade was characterized by large loading decks. What was special about the warehouse was that two railway lines ran through it and there were even a number of goods lifts with which trucks could load and unload their goods on the first floor.

At the end of WWII, large parts of the quay were destroyed and in the early 1950s a fire severely damaged the central part of the shed. In 1954, the shed was repaired in two parts and expanded and widened on the quay side. In the middle part a square with canteen building (currently the Fenixplein and canteen Walhalla) was created with the rebuilt sheds on both sides, which were given the names Fenix I and Fenix II. In the 1980s, port activities moved to the West and the warehouses have fallen into disuse.

Since 2007, the city of Rotterdam has made a strong case for the restructuring and transformation of the Katendrecht district. The Deliplein in particular formed an important part of this. As a result, Katendrecht has grown in in recent years from a deprived area into a trendy place and sought-after neighborhood with many culinary, creative and cultural enterprises.

Around 2009 Heijmans started the plans for the development of the Fenix I warehouse. After examining the surrounding building volumes at the Rijnhaven, it was decided to add a new volume on top of the warehouse. Mei architects and planners won the architect selection in 2013 for the repurposing of the warehouse (Mei architects and planners, 2021).

Transformation and addition



Location of images

The transformation of the Fenix I warehouse consists of three main parts. First, it compromises the existing 140 by 40 meters large warehouse. As Fenix Docks, the old warehouse now offers a space for a mixed program. Part of the warehouse has been converted into a multi-level public parking garage. On the quay there are five houses, each consisting of two floors of six meters high. The original loading doors provide access from the Rijnkade.

Furthermore, the program in the warehouse is shaped by culture and catering. This includes a number of pioneers in the transformation of Katendrecht, such as Fenix Food Factory and Circus Rotjeknor, who had temporary accommodation in the adjacent warehouse Fenix II. Together with the circus training of Codarts and the company Conny Janssen Danst, the circus formt the Cultuur Cluster. To integrate this program in the warehouse required column-free spaces with large free height. Large floor areas have been created by removing columns in some places. Large girders on the other reinforced columns make the spans possible.

The residential volume on top, an enclosed building block executes as flexible concrete construction, supports an immense steel table structure that is built through the existing volume. Within this upper volume, 212 rental and privately owned lofts are located. An interlayer consisting of a gigantic spaceframe structure separates the existing

1. Integration of culinary functions in warehouse

2. Fenixplein with canteen Walhalla

3. Courtyard elevated above warehouse

4. Passage through the heart of the warehouse

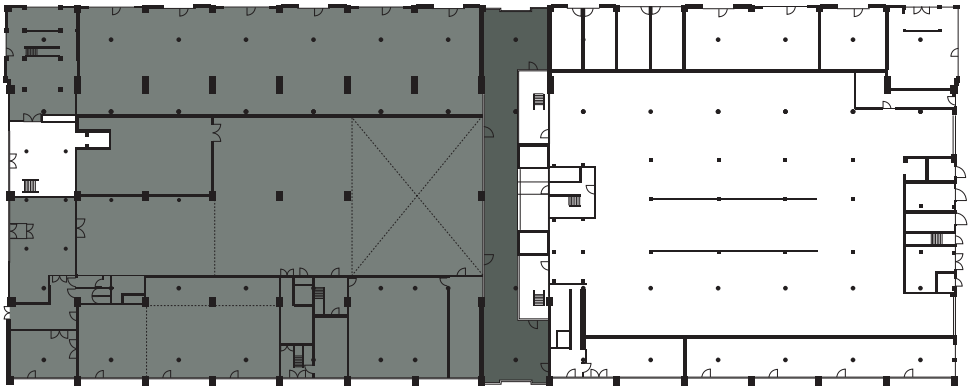
warehouse and new volume above. This layer has a clear height of 4 to 6 meters and accommodates loft apartments adjacent to a large courtyard garden in strong contrast with the industrial dockyard structures. The decision to use a gallery encourages the social interaction and stimulates an inclusive community (Muis, 2019).

The gallery on the inside of this new elevated building block connects to a public passageway on street level running through the heart of the original warehouse, connecting the quay with the city side. The different time layers and dynamics of the Fenix I warehouse become visible and tangible through the many sightlines that connects the various functions. Due to the new steel table construction running through the original warehouse and giving it a separate foundation, the monumental warehouse could be largely preserved. Technically, the new building volume is top is kept separated from the warehouse.

Sustainability is integrated within the design of Fenix I, starting with the maximum re-use of the existing building. Fenix I has been optimized in terms of circularity and biodiversity by a future-proof adaptable building structure, roof gardens, vertical green facades in the courtyard, rainwater harvesting, high-performance solar control glazing and high-efficient heat recovery and heat and cold storage (Luco, 2021).

Image top left: Goodwin, M. (n.d.). [Fenix I terrace] [Photograph]. Mei architects and planners. https://mei-arch.eu/projecten-archief/fenix-1/
Image bottom right: Van Duivenbode, O. (2019). Publieke doorgang op de begane grond [Photograph]. Architectenweb. https://architecten-web.nl/nieuws/artikel.aspx?ID=46827#photoid=334272

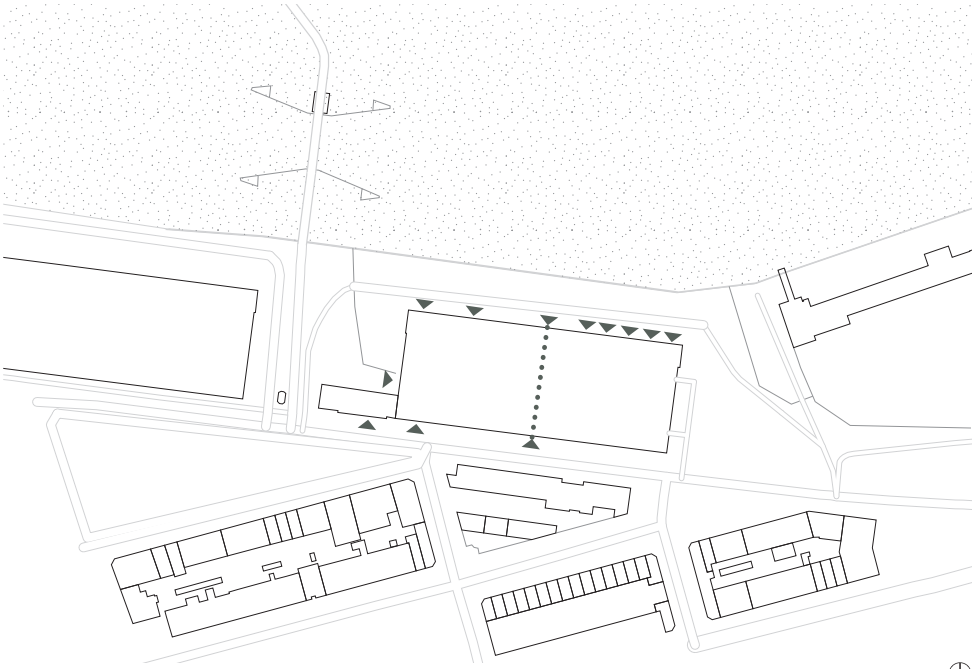
Public accessible space



Public accessible space ground floor

All the public accessible space of Fenix I is located on the ground floor. The main public interior element of the building is the passage through the heart of the building. The lighter colored areas are also public accessible spaces, however they are related to other functions, while the passage is only used as covered routing and entrance. The public accessible space is spread out over multiple parts of the ground floor, however not all of these spaces connect with each other on the interior.

Embedding in the city



Routing and entrances

Routing and entrances

The passageway on street level is on of the, and maybe the most defining, public interior space of Fenix I. The passage connects the quay with the city side of the building. The quay became a destination on its own already before the transformation, while it was part of the outdoor sitting space of the Fenix Food Factory, before located in the Fenix II warehouse. The passage trough the building creates shortcut from the Veerlaan to the Nico Koomanskade through the 140 meter long warehouse.

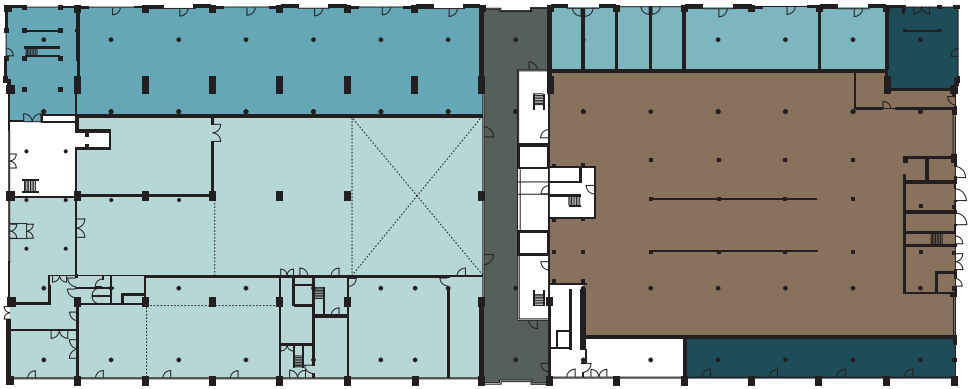
Entrance of passage waterside

Entrance passage neighborhood side

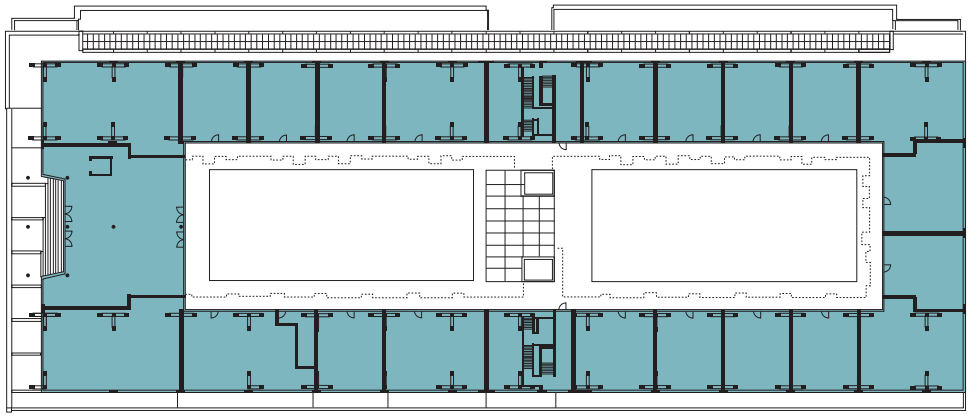
Entrances Fenix I

The passageway covers the complete height of the original warehouse volume and is opened up on both sides with large curtain walls with entrances both following the contours of the structure the original building and extension of the 50s on the side of the quay.

Assembling of functions



Functions ground floor



Functions third floor+

Housing and collective functions

The program in the former warehouse is shaped by culture and food and drinks. The dark green area facing the quay is used for a restaurant and the Fenix Food Market, which also is located on a part of the first floor above. The yellow areas are used by Circus Rotjeknor, the circus training of Codarts and the company Conny janssen Danst forming the Cultuur Cluster. The space in the middle indicates the passage, which connects to the gallery of the apartment volume above.

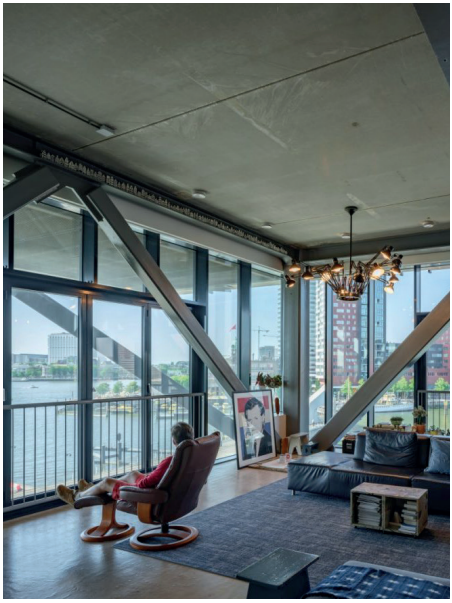
The other part of the ground floor is mainly in use as parking. Other function on this side include five houses on the quay and some commercial spaces. The new volume constructed above the original warehouse volume is completely in use as housing with a central collective courtyard. This organization creates a mixed-use program in the warehouse volume with a volume dedicated to housing on top.

Passage
Cafe/restaurant
Cultural
Housing
Commercial
Parking

Foodmarket

Restaurant

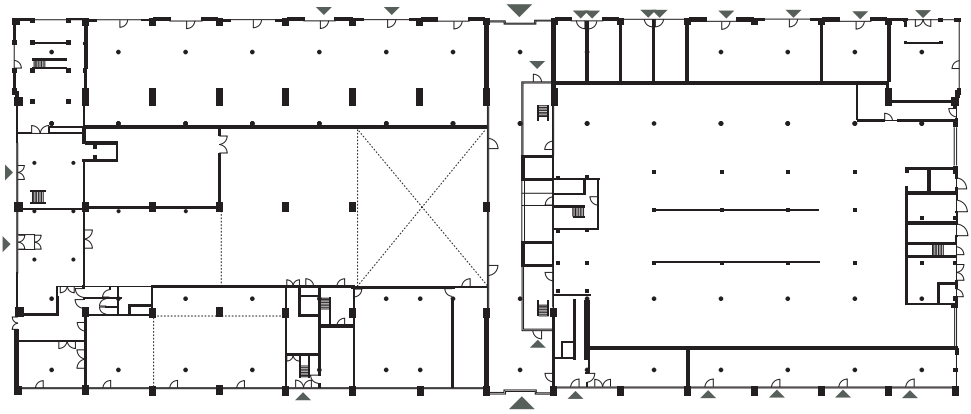
Cultural space



Interior of dwelling

Image top right: Pinchos 21. (n.d.). [Photograph]. Satelliet. https://www.satelliet.net/artikelen/21-pinchos/
Image bottom left: Van Duivenbode, O. (2019). Cultuurcluster [Photograph]. Architectenweb. https://architectenweb.nl/nieuws/artikel.aspx?ID=46827#photoid=334260
Image bottom right: Van Duivenbode, O. (2019). [Appartment on interlayer] [Photograph]. Mei architects and planners. https://mei-arch.eu/projecten-archief/fenix-1/

Entrances



Location of entrances to functions

Entrances to functions

The passageway only provided access to the staircase and elevators connecting to the apartment volume above the warehouse and not directly to the other functions. All entrances to the other functions are located on the outside of the block. Therefore the passage is mainly used by people who live in the apartments or people who use it as a shortcut, but not as a collective entrance to the other functions in the building. The outward facing entrances activate the exterior facades of the building, mainly on the side of the quay with the restaurant and Fenix Food Factory.

Entrance to dwelling on ground floor

Entrance cultural functions

Entrance to cafe of cultural functions

Entrances commercial spaces

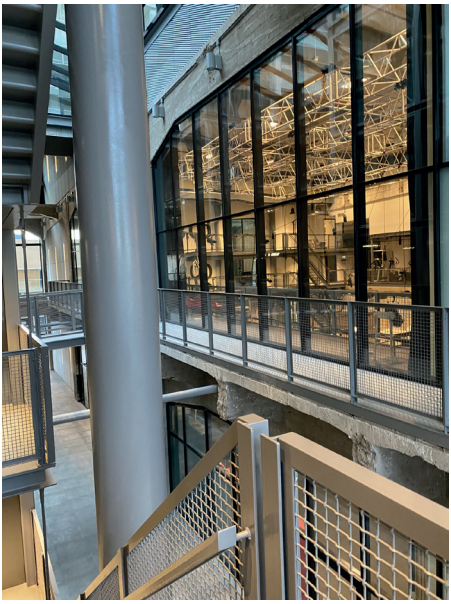
Design of entrances

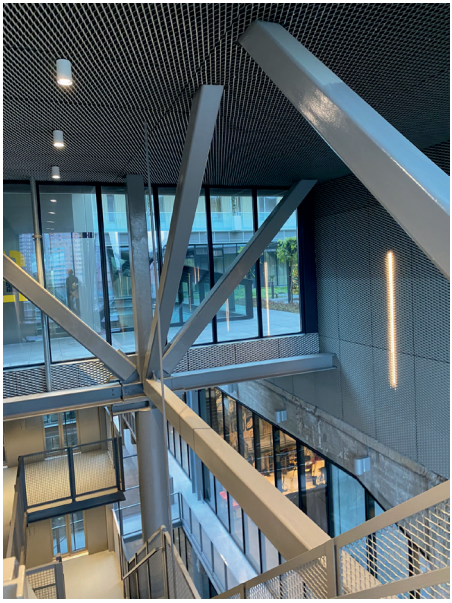
The entrances to the houses along the quay show similarities to the entrances created for the other functions along the quay created within the existing rhythm and shape of the original building and its structure. The entrance to the Cultuur Cluster is created with two large curtain walls in the side of the building covering the entire height and showing similarities to the entrances of the passage.

Atrium & Void

Passage

The central passageway through the former warehouse covers the entire height of the building and even continues above the original volume into the staircase and access to the galleries of the apartment volume. The large open space has large curtain walls and skylight, which is visible in the courtyard of the apartment volume, let in light into the central open space. The atrium forms the connecting element between function both in the existing volume and between the existing and new volume.



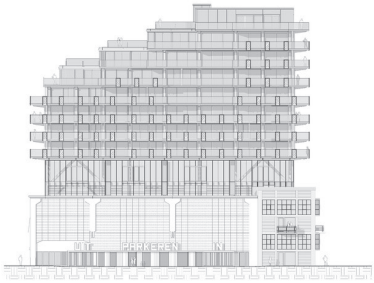



FENIX

Daylight

Elevation water side

Elevation Dolf-Henkesplein

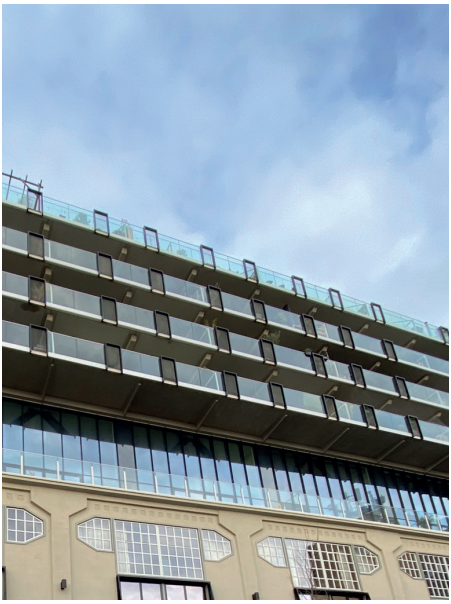


Elevation parking side

Opening up

The entrance foyer of the main building has a double height with curtain walls on two sides. One is located under the overhang of the second floor, but still plenty of daylight enters the foyer and together with the void creates a large open space. The walking bridges and hallways with windows on both sides create on one hand openness, but also light connections between the various volumes. With the open central space in the former laboratory halls, daylight enters the apartments from two sides. For the incoming daylight, again the existing available emelemtns have been used.

Courtyard of dwellings on third floor

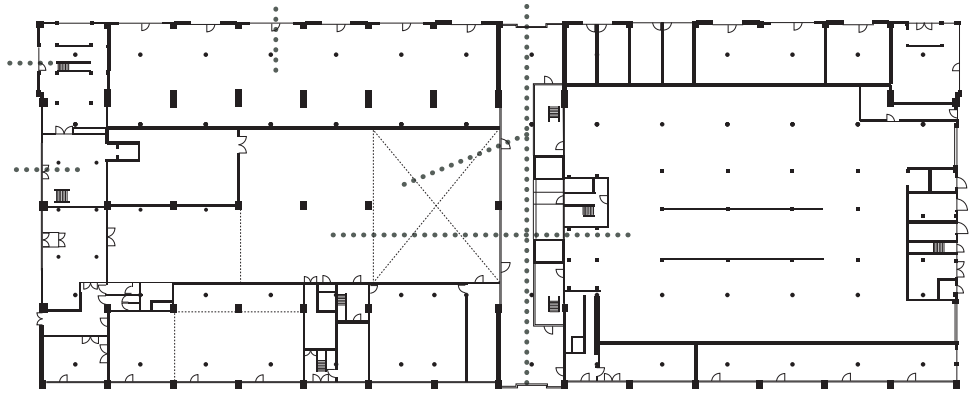


Glass incision layer

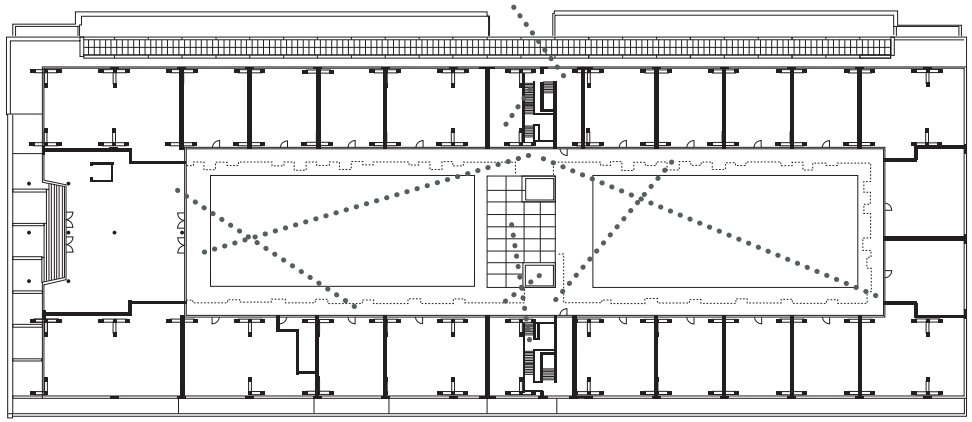
Entrances cultural functions

Opening up ground floor towards Veerlaan

Visual connections



Visual connections ground floor



Visual connections third floor+

Internal connections

The existing and newly created openings in the facades improve the visual connections between the building and surrounding. On the inside, the similar method has been used to create visual connections between the passage and the functions in the cultural cluster on various levels. The void in the culture cluster, the large windows to the passage and skylight also provide daylight for the cultural functions and even creates sightlines from the courtyard of the apartment volume to the interior functions. The spatial layout with apartments and galleries facing towards the communal courtyard stimulates social interaction and provides visual connections to other parts and levels of the building.

Visual connection passage

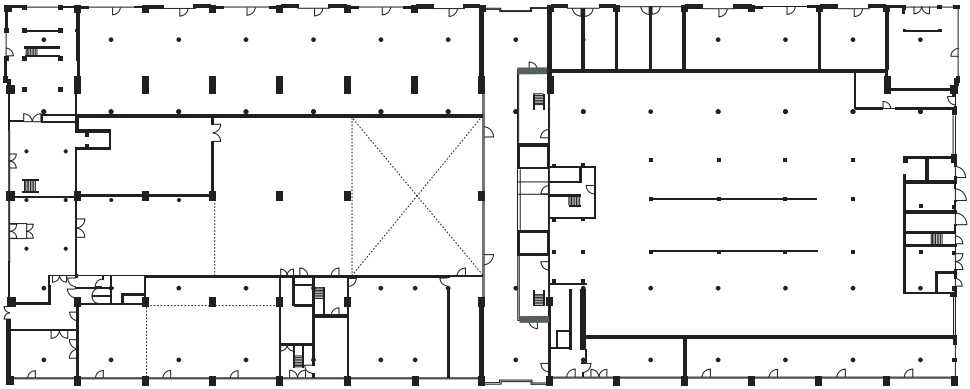
Visual connection passage and cultural spaces

courtyard creates visual connections

Openings create a view to quay

Image top right: Goodwin, M. (z.d.). [Visual connection to Cultuurcluster] [Photograph]. Mei architects and planners. https://mei-arch.eu/projecten-archief/fenix-1/

Security



Location of locked entrances

Access to apartments

The passage connects to the apartment volume on top of the former warehouse. The entrances to the staircases and lifts can only be opened with a key. By positioning the location for the key in the passage and not at the entrance of the passage, the passageway remains public accessible for everyone.

Materials

Pavement quay

Pavement street

Floor finish in passage

Pavement in coutyard

Use of tiles

Various kinds of pavement have been applied on various sides of Fenix I. The public accessible passage also makes use of a hard material in the form of tiles, however not similar to the paving used in public exterior space. Anyways, this material adds to the public character of the passageway.

Timmerhuis | Rotterdam

Project information

Location:	Rotterdam
Former program:	Stadstimmerhuis (office for municipal services for building)
New Program:	Mixed-use
Use:	Housing, offices, commercial, cultural and cafe/restaurant
Architect:	OMA
Completed:	2015
Floor area:	45.000 m^2

Stadstimmerhuis

The Stadstimmerhuis is located on the corner of the Meent and Haagseveer. Stadstimmerhuis has long been the name of the office of the municipal services involved in building. Materials were also stored in the Stadstimmerhuis. The name of the builingds refers to the old profession of ´Stadstimmerman´ (city carpenter), a craftsman who carried out assignments for the city. Later the city got a city architect. The Rotterdam Stadstimmerhuis was located on the Haringvliet, but was destroyed during the war. With the construction of a new Stadstimmerhuis, the municipal services were concentrated around the Coolsingel.

The original design for the building consisted of an elongated building along the Haagseveer with four wings at right angles to it. Only one of those wings, along the Meent, has been realized. This wing contained retail space on the ground floor. The main entrance was supposed to be on the Rodezand between the two middle wings, in line with the Stadhuisstraat. Hence, the building really only has secondary entrances. Originally a low building block with a café restaurant and company canteen was planned on the Meent, opposite of the building of De Nederlanden or grand café Dudok. The officials could reach it via an air lift. It was not until 1974 tat the first pile was driven for an extension withing the L-shape, design by Ronald Gill, architect at Municipal Works (Platform Wederopbouw Rotterdam, z.d.). That building was demolished in 2011, before the transformation by OMA.

Image top right: Van Helleman, J. (2016). Timmerhuis Rotterdam OMA [Photograph]. Flickr. https://www.flickr.com/photos/janvanhelleman/27715131235/in/dateposted/

Transformation and addition

Location of images

The Timmerhuis on the corner of the Meent and the Rodezand in Rotterdam is a new mixed-use building. The building designed by the office of Rem Kookhaas, OMA, houses a museum, shops, restaurants, offices and apartments. The Timmerhuis consist of the integration of the characteristic L-shaped Stadstimmerhuis on the Meent and the new construction on the site where the extension from the 1880s was demolished. The new Timmerhuis is described by architect Reinier de Graaf of OMA as a cloud of glass and steel (Van Helleman, 2018). The building with an innovative steel structure is bordered by the monumental volume on two sides. The mixed-use building with the Rotterdam Museum on the ground floor, a public passage, the atrium, which connects the Coolsingel with the Laurenskwartier, and shops and restaurants in the surrounding streets. Under the Timmerhuis, an parking garage is constructed. Above the plinth, four stories have been realized for offices of the municipality of Rotterdam. Building layers with a total of 84 apartments have been realized above the offices. The height

1. Commercial funtions in former Stadstimmerhuis

2. Entrance to passage on Haagseveer

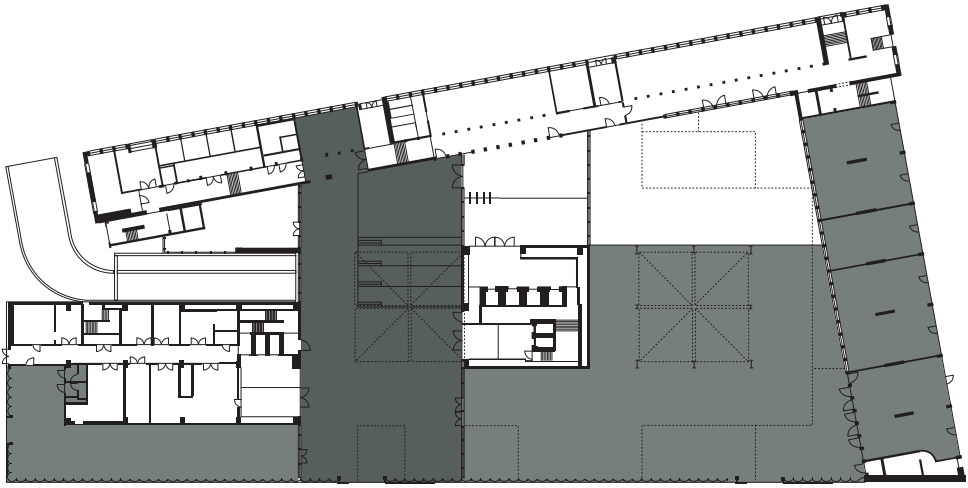
3. Cafe on Raamplein

4. Entrance to passage on Rodezand

of the Timmerhuis is 60 meters, with 14 layers in the north tower and 11 stories in the south tower. The Timmerhuis integrates with the neighboring Stadstimmerhuis by maintaining the same floor heights, while the plinth height of 20 meters conforms the character of the surrounding Laurenskwartier.

The Timmerhuis's innovative structural system generates maximum efficiency and versatility to both in construction and in program; units can adapt to either office space or residential parameters as desired (Ameri, 2021). Green terraces on higher levels provide the possibility of an apartment with a garden in the heart of urban Rotterdam. On the street level, the structure allows for generous open space, with modules overhanging rather than encroaching into an interstitial area, encouraging an active and open engagement between the Timmerhuis and the city.

Public accessible space



Public accessible space ground floor

The public accessible space in the Timmerhuis is all located on the ground floor level of the building. The main public interior feature of the building is the passage through the building. Other public interior function are used by other functions considered part of the public domain. Some of the public interior function connect with each other, but there are also spaces that do not connect to others.

Embedding in the city

Routing and entrances

Routing and entrances

The main public interior feature of the Timmerhuis is the Halvemaanpassage, which connects the Haagseveer and Laurenskwartier with shops and restaurants to the Rodezand and continues the routing to the Stadhuisstraat and Coolsingel. Other entrances are located in both the old and new volume and provides access to multiple individual functions.

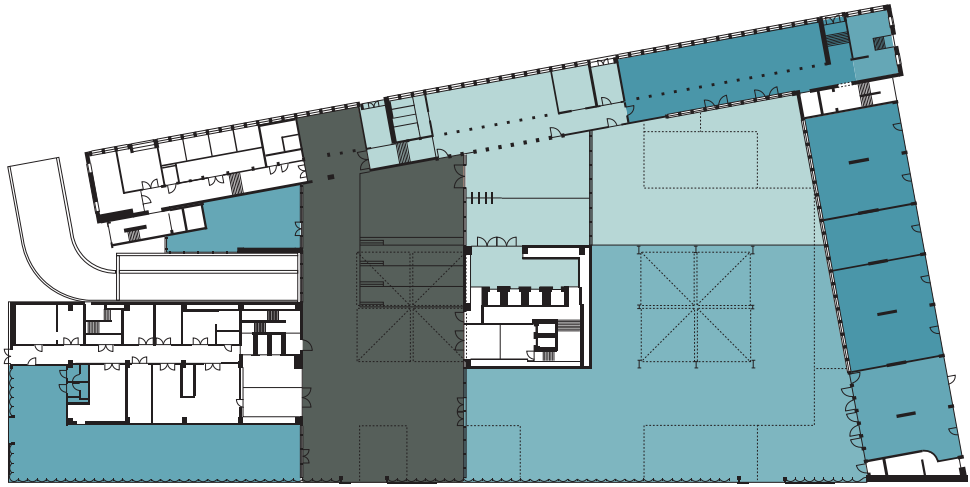
Entrance passage new volume

Entrance passage existing volume

Entrances Timmerhuis

The passage can be accessed from two sides. One of the entrances is located in the existing volume of the Timmerhuis and the other entrance on the side of the city hall is located in the addition. Therefore, the design of the two entrances is completely different. The entrance in the existing volume on the Haagseveer is created by opening up five windows to the level of the ground floor level. With this subtle intervention, the rhythm of the facade is respected. A total of three entrances are created in the newer volume of which one is the entrance of the passage. The entrances are designed as big doors in the large curved glass facades that can be placed in an open position.

Assembling of functions



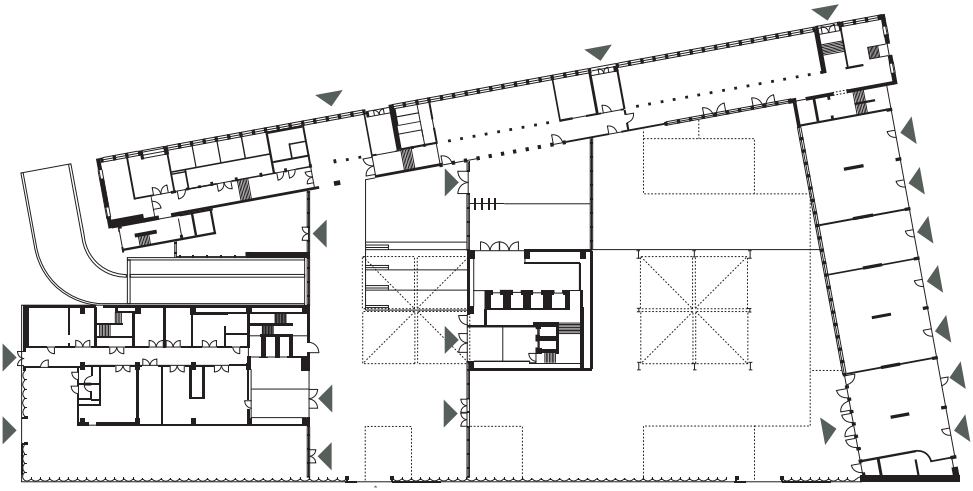
Functions ground floor

Functions

The ground floor of the Timmerhuis houses multiple public accessible spaces. The main space that is public accessible is the passage through the building. A cafe or restaurant is located in three corners of the building. The light green areas indicate the shops in the building. The Rotterdam Museum was located in the new volume on the ground floor as well, however the museum closed. The blue area indicates the entrance area of the offices on the floors above. Above the plinth, four stories of offices are created for the municipality of Rotterdam. Above the office space, building layers with a total of 84 apartments have been created. So the ground floor has a horizontal mix of functions and a vertical mix can also be recognized with the offices and apartments above.


Passage
Office
Shops
Cafe/restaurant
Museum

Entrances



Entrances to functions

Entrances to functions

Entrances to functions are both located on the exterior and interior. The shops on the Meent are only accessible from that side. The cafe in the left bottom corner, former museum space and entrance foyer to the offices can both be accessed from outside the building as from the passage. On other food facility is only accessible from the public accessible passage. The passage also connects to the two vertical cores to the apartment levels higher in the added volume. This assembling of functions and entrances stimulates the use of the public interior space, while users of various functions make use of the same space to enter their destination.

Entrance to shop

Entrance cafe

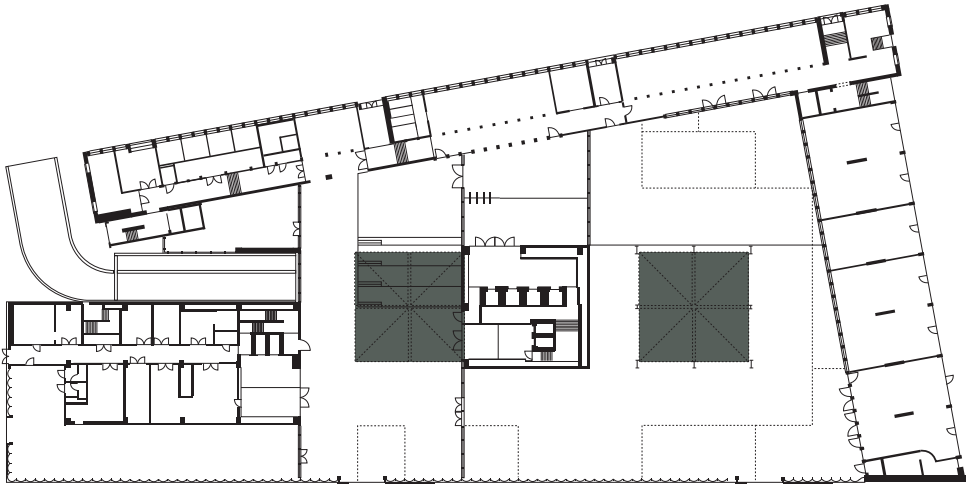
Entrance passage to dwellings

Entrance passage to offices

Design of entrances

The entrances on the exterior of the existing volume make use of possibilities and entrances that were already present or are designed in the same subtle way by opening op some parts and taking into account the rhythm as the entrance to the passage. The other two entrances to the functions in the new volume besides the entrance to the passage are designed in the similar way with a big door that slides open. The entrances to functions located in the passage make use of glass doors and also the wall separating the functions from the passage are as open as possible.

Atrium & Void



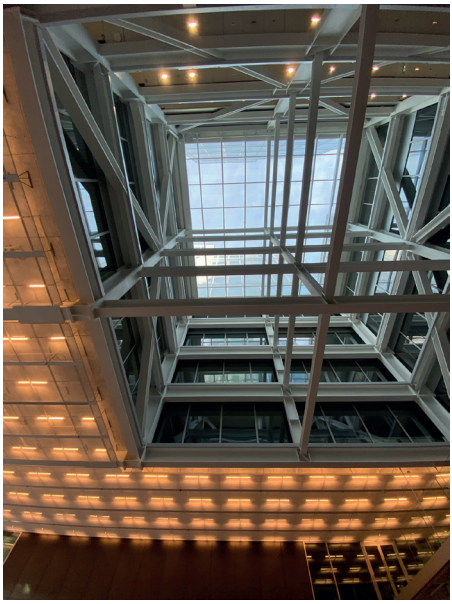
Atria

Longitudinal section over atria

Atria

Two atria are implemented in the new volume of the Timmerhuis. One is located above the passage and the other is located above the space that was in use by the museum. Those large atriums with visible steel structure provide light to the office floors and public functions on the ground floor and connect the various floors visually.

Section: ArchDaily, (n.d.). [Section Timmerhuis] [Drawing]. ArchDaily. https://www.archdaily.com/778654/timmerhuis-oma/566ad15ce58eceb74b00000e-timmerhuis-oma-photo?next_project=no]



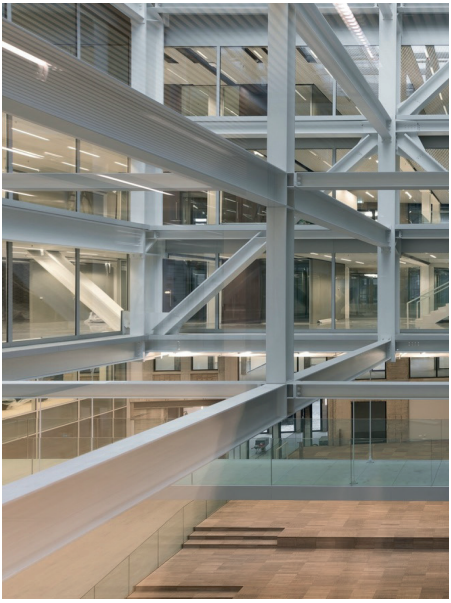
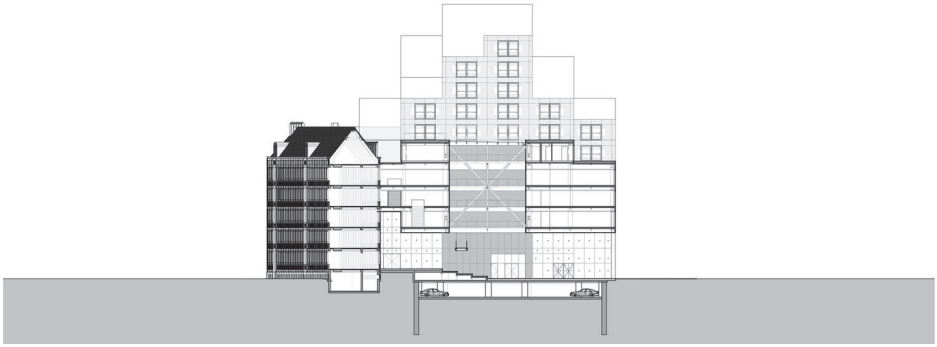


Image bottom left: Van Duivenbode, O. (n.d.). [Atrium Timmerhuis] [Photograph]. ArchDaily. https://www.archdaily.com/778654/timmerhuis-oma/566ad15ce58eceb-74b00000e-timmerhuis-oma-photo?next_project=no | Image bottom right: Van Damme, S. (n.d.). [Atrium Timmerhuis] [Photograph]. ArchDaily. https://www.archdaily.com/778654/timmerhuis-oma/566ad1c8e58ece93a300002d-timmerhuis-oma-photo?next_project=no

Daylight

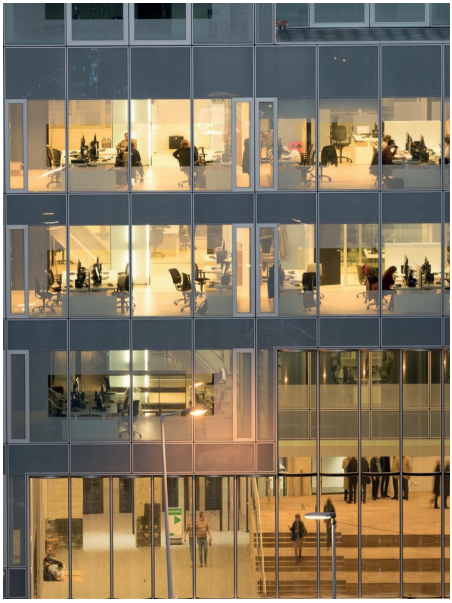


Short section over atrium

Glass facades

The atria in the new volume already increases the amount of daylight entering the building. The double height, and in some places along the facade even higher, ground floor with curved curtain walls create an open public space on the ground floor with a lot of light. Also the facades to the office space and apartments above are almost completely made out of glass.

Section: ArchDaily, (n.d.). [Section Timmerhuis] [Drawing]. ArchDaily. https://www.archdaily.com/778654/timmerhuis-oma/566ad15ce58eceb74b00000e-timmerhuis-oma-photo?next_project=no]



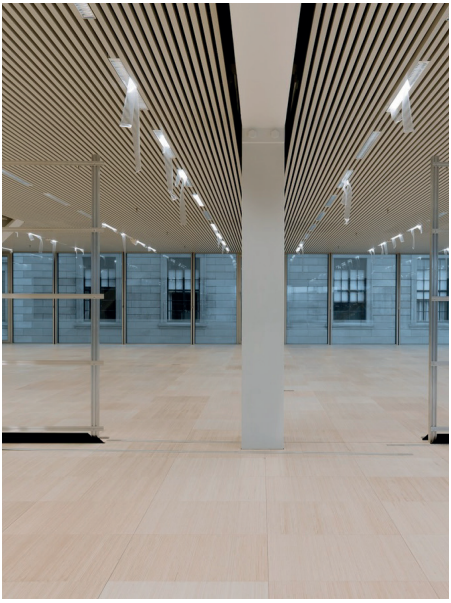
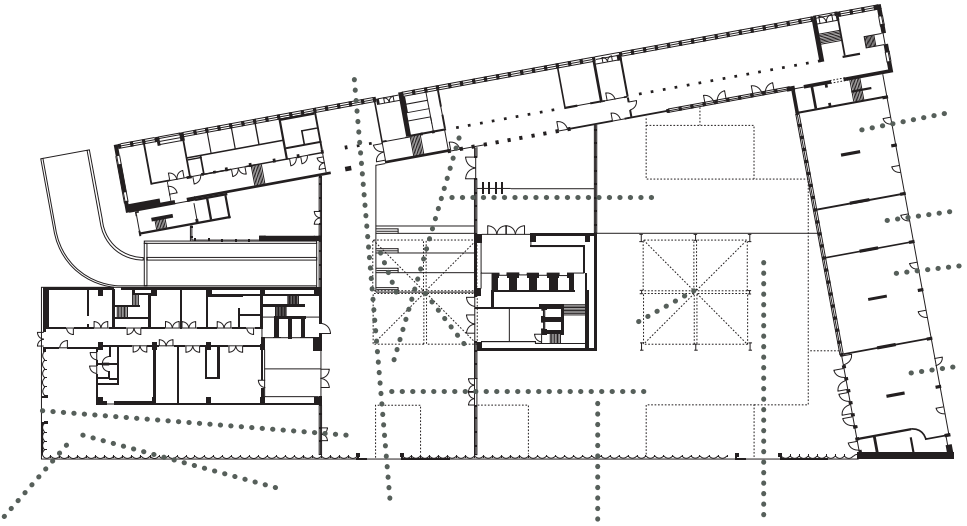


Image bottom left: Van Duivenbode, O. (n.d.). Timmerhuis exterior [Photograph]. ArchDaily. https://www.archdaily.com/778654/timmerhuis-oma/566ad1ace58ece-93a300002c-timmerhuis-oma-photo?next_project=no
Image bottom right: Van Damme, S. (n.d.). [Timmerhuis interior offices] [Photograph]. ArchDaily. https://www.archdaily.com/778654/timmerhuis-oma/566ad17ce58e-ceb74b00000f-timmerhuis-oma-photo?next_project=no

Visual connections



Visual connections

Internal connections

The glass curtain walls used for the facade of the ground floor in the new volume creates visual connections between the functions inside and surrounding area along the complete perimeter of the volume. The shopping windows along the Meent already had this quality. Also the walls between the functions and the passage are made of glass for the biggest part, allowing visual connections between the passage and the functions. The atriums create visual connections between various levels of the offices, but also to the passage and museum space and the other way around. While the passage has a double height, a visual connection between the passage and the first floor the older volume of the Timmerhuis is also possible.

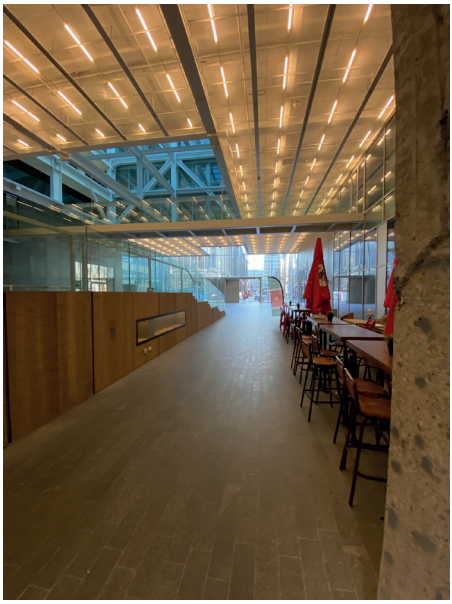
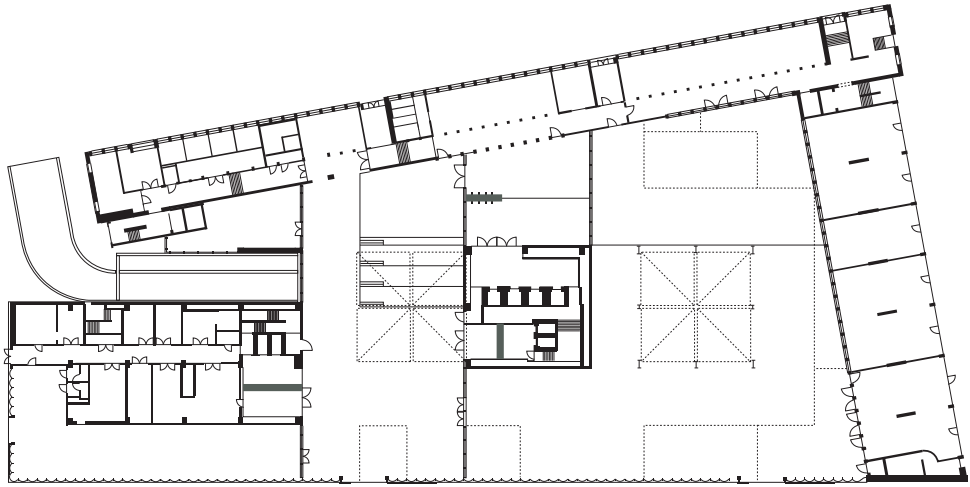


Image bottom right: Van Damme, S. (n.d.). [Atrium Timmerhuis] [Photograph]. ArchDaily. https://www.archdaily.com/778654/timmerhuis-oma/566ad1c8e58ece93a300002d-timmerhuis-oma-photo?next_project=no

Security



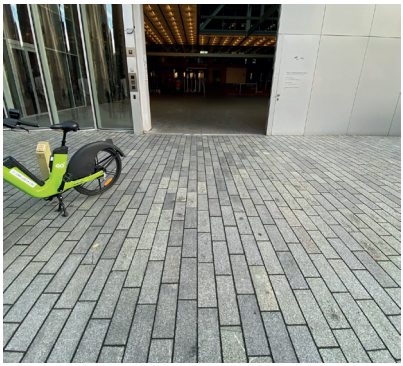
Location of locked entrances

Access to apartments and offices

The vertical circulation cores to the apartments are only accessible with a key. Two doors have to be entered before reaching the lifts and staircase. The first space can be entered without a key, but for the second door a key is needed. This creates an space in between the private and public domain. The staircases and lifts to the office spaces on higher floors are also closed off with security gates. The entrance area of the offices is public accessible during opening hours.

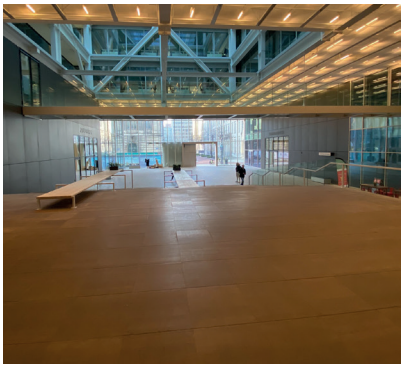
Materials

Continuity of materials



Pavement surroundings

Border outside and inside



Wooden interior element

Use of tiles

The material used for the pavement on the Raam, Rodezand, Stadhuisstraat and Meent continues on the interior public spaces of the passage and museum space. The only edge between the interior and exterior is the rail for the big door to close the passage. The continuation of the material adds to the public character of the passage and museum and material wise connects the Haagseveer, passage through the Stadhuisstraat to the Coolsingel. A wooden element is part of the interior design and designed as a fixed element in the public space. The wooden element are the stairs to the entrance to the foyer of the offices, but can also function as podium, sitting or meeting area. The passage with this element can be used by the municipality or inhabitants of the apartments for activities. Even the artificial lighting is clearly integrated withing the design. These elements also enhance the public character of the interior space.

Tuin van Noord | Rotterdam

Project information

Location:	Rotterdam
Former program:	Prison
New Program:	Mixed-use
Use:	Housing, office space and cafe/restaurant
Architect:	Wessel de Jonge Architecten (WDJA)
Completed:	2020 (first phase)
Floor area:	30.500 m^2

The Noordsingel

The Noordsingel is one of the oldest judicial complexes in the Netherlands. It consists of two buildings; the Penal Prison and the Courthouse. The prison is built according to an American concept; cell wings that are centrally overlooked from the panopticon. The original idea dates back to 1864 by prison architect Allard C. Pierson. The complex was built in the period 1866-1872. However, it was J.F. Metzelaar who had to finish the project due to Pierson's death in 1870 (Tuin van Noord, n.d.).

The wing prison housed a total of 340 cells, spread over four wings, each three stories high. On the corners of the square prison site were robust double guard houses. There was also an infirmary and each wing had its own chapel to prevent contact between prisoners. The executive residences were located outside the wall.

Also on the outside, on the side of the canal, the construction of a courthouse with Notarial Archives started in 1899. The building was designed by W.C. Metzelaar, who like his father, became famous as the government architect of characteristic domed prisons and courthouses. The Rotterdam Courthouse is considered as his best work and is a good example of 19th century government architecture. Until 1996, the district court and subdistrict court were located here. It has had the status of a national monument since 1998 (Tuin van Noord, n.d.).

Image: WDJArchitecten & Quadrat. (n.d.). [Tuin van Noord aerial impression] [[Visualization]]. WDJArchitecten. https://www.wdjarchitecten.nl/projecten/transformatie-tuin-van-noord/

Transformation and addition

Location of images

The former prison on the Noordsingel in Rotterdam is a unique complex in the city structure and the history of the prison system in the Netherlands. The release of the site, surprisingly spacious in size and openness, meant a unique opportunity to add a new part of the city with a strong and individual character to the densely built-up Oude Noorden. Its striking buildings and intriguing history contribute to this (WDJArchitecten, 2021).

The complex is being transformed from prison to Tuin van Noord (Garden of North). Here, the users can live, work and relax in the existing buildings. The buildings that are preserved ensure that the memory of the prison remains part of the collective memory. The site will be transformed into an enclosed city garden where the urban dweller can enjoy space, greenery and silence.

The Tuin van Noord will be publicly accessible by installing new gates and passageways. The hidden character is retained as a quality for this new 'hortus conclusus' which thus complements the existing outdoor spaces in the Oude Noorden.

The existing buildings, each originally designed for a specific function, have been preserved and have been stripped of later additions. The original design and architecture is thus recognizable again.

1. Former courthouse

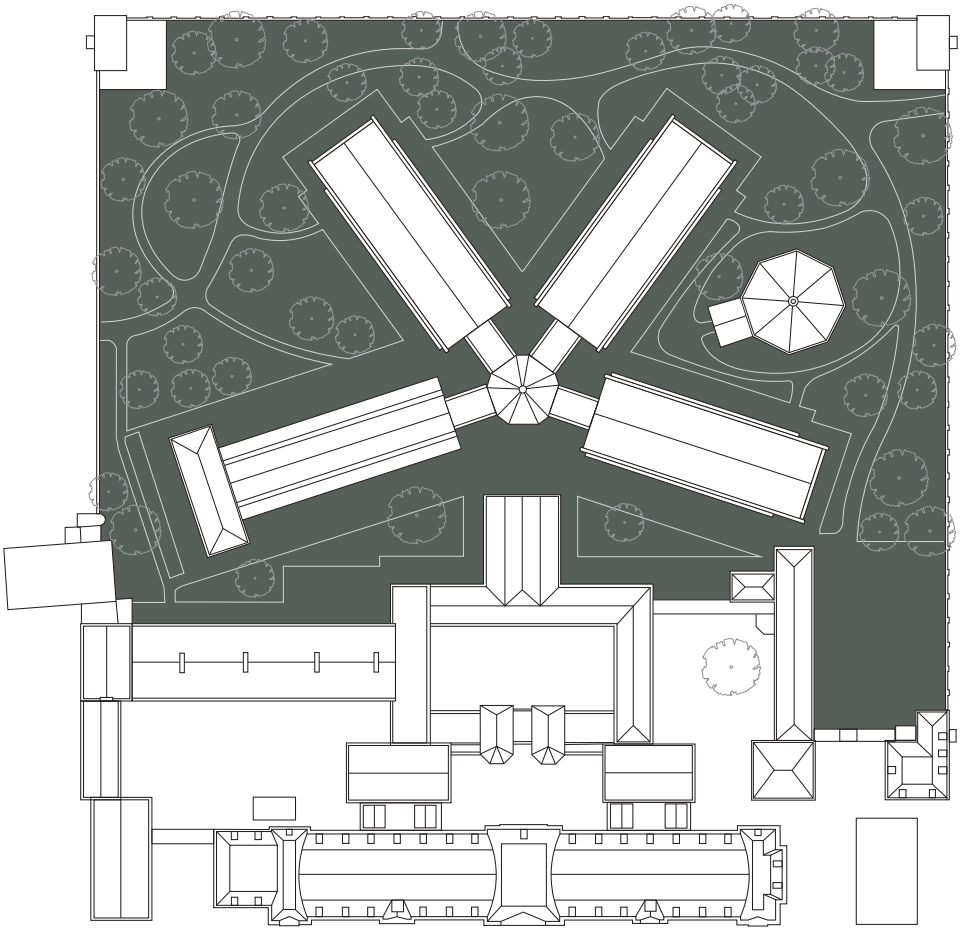
2. Former guard house

3. Cell wing transformed into housing

4. Additional housing volume

Breakthroughs in a number of connecting corridors ensure, together with the breakthroughs in the wall, that the complex is fordable. Demolished building parts are still recognizable everywhere in the facades by a plastered contour in light grey cement plaster (Architectenweb, 2021).
Living is the most important function in Tuin van Noord. Various collective and individual forms of housing are being realized for various target groups in the existing buildings and in new construction. Contemporary living in the buildings is made possible by a number of powerful but measured interventions that will bring air and light.
The original Detention House has been partly demolished to make place for parking facilities, making the 'Tuin' itself the exclusive domain of pedestrians and cyclists. Above the new parking lot, a new volume, following the contours of the historic building, takes the place of the demolished volume. The new building consists of small apartments as an addition to the residential program.
Social functions, supplemented by business and office spaces and a restaurant, make the area attractive not only for living, but also for visiting and staying for a shorter of longer period of time. A special place is created with a new layered meaning that is part of the urban life in Oude Noorden and that links it with its past (Architectenweb, 2021).

Public accessible space



Public accessible space

The enclosed garden is the public accessible space of the Tuin van Noord. This transformation does not include any interior public space, but is still included in the research while it opens us a former closed off area to the public. It misses the roof element of a public interior, but still contains the enclosed feeling, while the Tuin van Noord is completely surrounded by walls and located on the interior of an urban block. It is also researched for the relation and tension between the private functions in this city garden.

Embedding in the city

Location of images

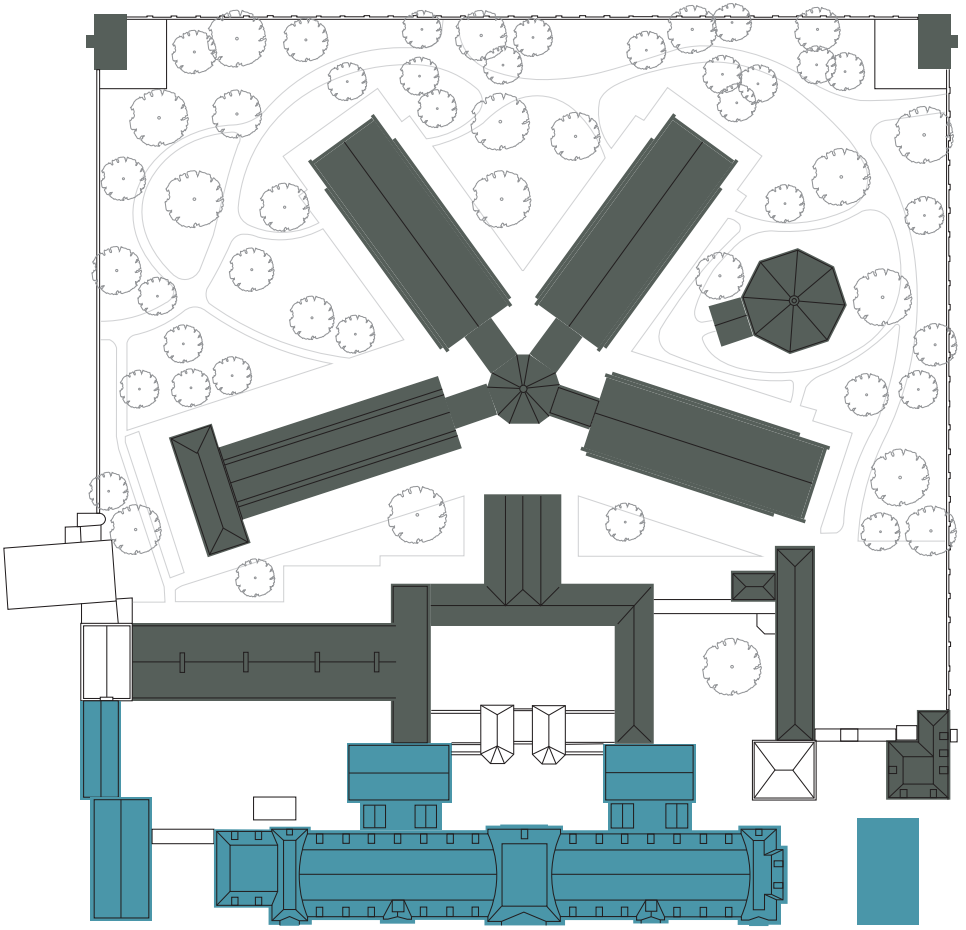
Routing and entrances

The former prison is located along the Noordsingel. The entrance provided access to the former courthouse volume. The prison is located behind this volume. The complex is situated within an urban block and enclosed by housing along the Zegwaardstraat, Burgemeester Roosstraat and Zwart Janstraat. Currently the the main route through the courtyard connects the Noordsingel with the Zegwaardstraat also making use of a passage through the buildings located at the last named street. An additional main entrance to the garden is planned by creating a passage at the Zwart Janstraat, however this entrance has not been constructed yet. Two more entrances along are located the Burgemeeste Roosstraat.

Entrances Tuin van Noord

The existing passage through the former courthouse is still in use however does not connect to the garden behind it and is used for the new function within this volume. New entrances are created in the existing wall surrounding the prison grounds. By the use of gates in several locations, the hidden character of the site is remained as a quality for this new enclosed garden.

Assembling of functions



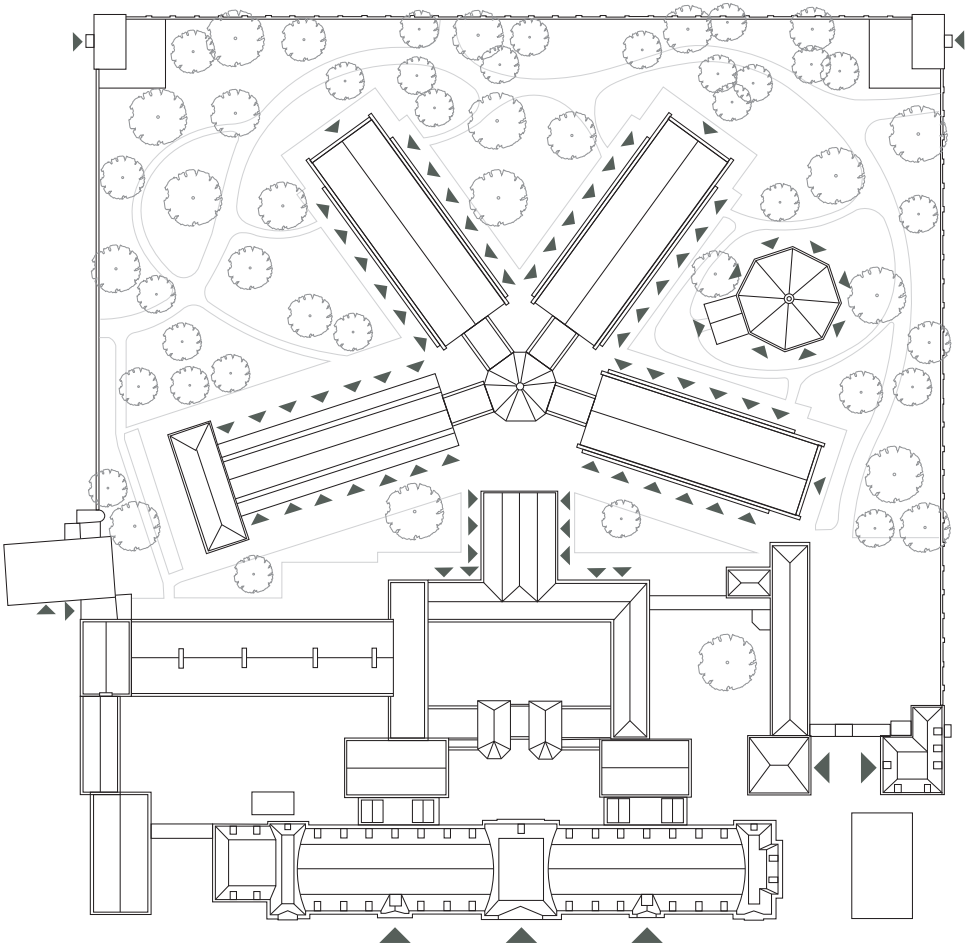
Assembling of functions ground floor

Strict division

Until now, the complex is used for only two functions. The former courtyard building in in use as office space for several companies. The multiple wings of the prison, guard houses in the corner and new volume at the location at the former Detention House are transformed into housing. Due to the various building volumes available on the complex the division between the two functions is very harsh leaving little space for encounters of the various user groups of the complex.

Housing
Office

Entrances



Location of entrances to functions

Entrances to functions

The organization of entrances adds to the separation of functions. The courthouse volume that is transformed into office space can be entered from the Noordsingel. The inhabitants of the Tuin van Noord have to enter their dwellings via the garden. Therefore, the users of both functions hardly make use of a collective public space so the garden is mostly used by the dwellers and people who use the garden as part of the routing. The organization of entrances on both sided of the former cell wings creates a row of entrances in the volume and together with other volumes the entrances give the idea of assembling around smaller courtyards.

Design of entrances

New entrances are created for the housing in the former cell wings. Each house has its own private entrance. These new entrances add to the openness of the volumes, while they are constructed as large glass openings. The houses in the cell wings have their living space on the ground floor. Therefore the facade on ground floor level still provided an enclosed feeling with only a door and window with bars for each house. The interventions for the new entrances are clearly distinguishable from the original building due to the use of materials and their color.

Daylight

Opening up the prison

To transform the enclosed prison volumes into housing, they had to be opened up. Interventions to open up the volumes are recognizable by the use of black steel and glass and thereby add a new layer to the existing building. The cell wings are split over the length, creating houses on both sides. These houses have their living area on the first floor and are opened up with large windows over almost the entire length of the volumes. The bars in front of the smaller existing windows are kept or in other cases replaced with a similar rod division in the windows. The smaller windows provide daylight to the bedrooms located on the second and third floor.

Elevations: WDJArchitecten. (n.d.). [Elevation prison wing Tuin van Noord] [Drawing]. WDJArchitecten. https://www.wdjarchitecten.nl/projecten/transformatie-tuin-van-noord/

Materials

Tension between public and private

The urban design of the dwellings and their private garden creates tension with the garden that has been opened up to the public. The private gardens of the houses are located in front of the dwellings and only separated from the public garden with some low bushes. This keeps the entire complex open, but leaves little privacy for the private gardens used as sitting area or playground for children. It is also possible for people to walk past the houses right in front of the gardens. It seems as if they tried to indicate a public and less public route with different kinds of pavement. The asphalt is the main routing through the garden and the red stone pavement is the more private connection between the public routing and the garden and front door of the houses. The garden in this case works as transition between the private and public domain to soften the transition.

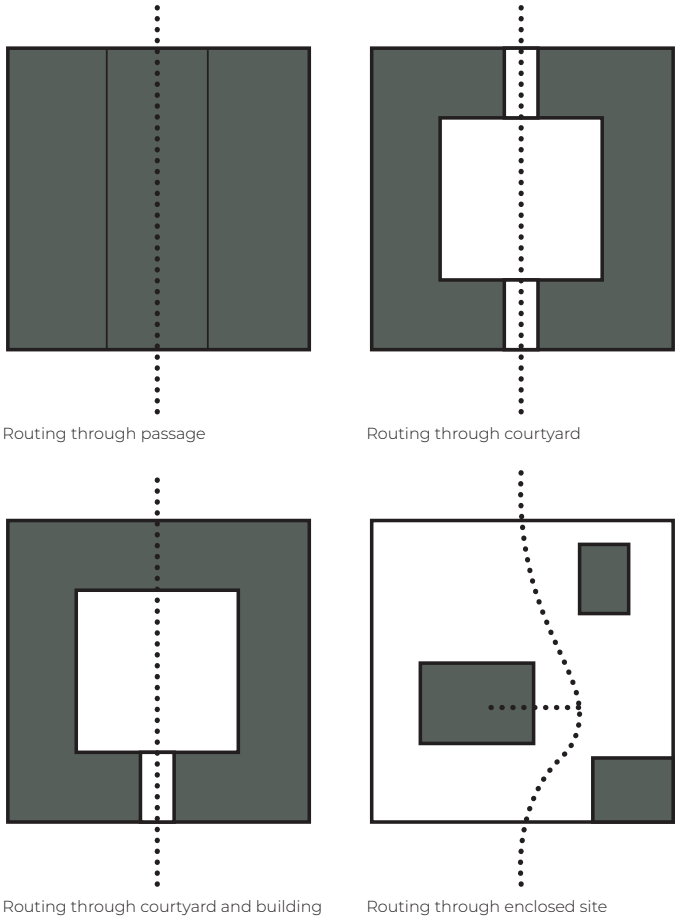
Quality of public space

Enclosed city garden

The garden is designed as enclosed quite area in the Oude Noorden where the urban dweller can enjoy space, greenery and silence. The garden also includes a small playground for children. Such an activity stimulates the use of the public space and makes it more than only a routing through the garden.

III Strategies

Embedding in the city



Routing through passage

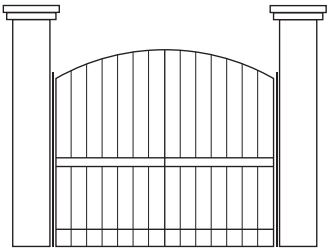
Routing through courtyard

Routing through courtyard and building

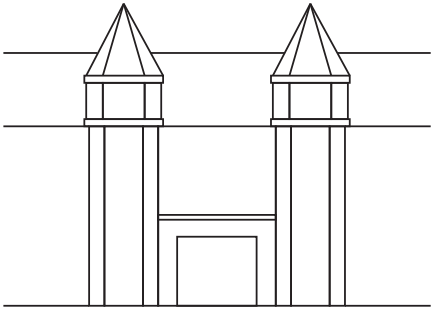
Routing through enclosed site

Routing

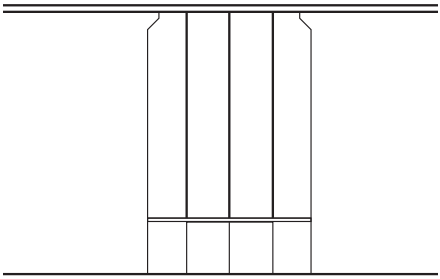
Four main strategies can be recognized in the case studies regarding the embedding of the buildings or complexes after the design for adaptive re-use. First of all the passage through the building. The seond option is the passage through the enclosed courtyard of a complex of buildings or volumes without entering a building. This still can be considered as public interior due to its enclosed experiene. The third strategy is a combination of the first two, so a routing through a courtyard an a part of the building. The last option is a main route through a complex that has been made accessible to the public. The public interior spaces are not part of the routing, but only conneted to it.



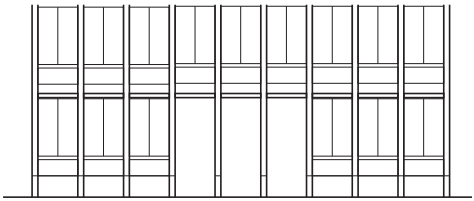
Gates



Existing monumental



New recognizable

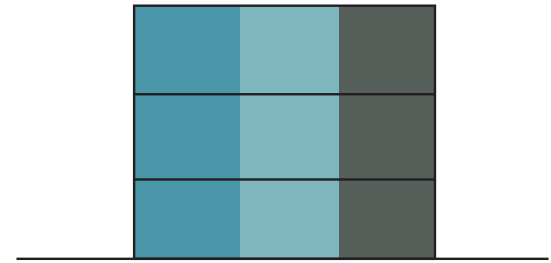


New in rhythm with existing

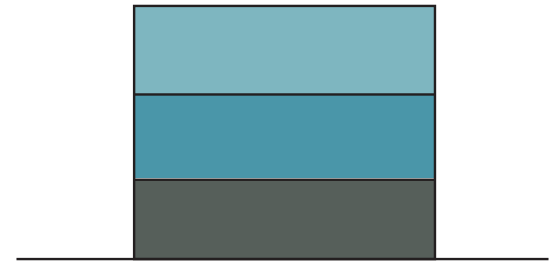
Entrances

The use of gates as connection between the public and the private is mostly used when the public space of the street continues in an private owned, but public accessible outdoor area. Various strategies can be seen regarding the entrances to interior spaces or enclosed courtyards. The design varies from monumental gates or large glass interventions to subtle openings in line with the rythm of the existing facade. The design and location is also dependent on what is present in the existing volumes. The design of entrances and possibilites also vary when located in the existing monumental part or when located in an new addition or larger intervention in a volume. In the last situation, larger entrances with more glass are created, while in those locations, opening up the volume does not interfere with the values of the existing monumental parts.

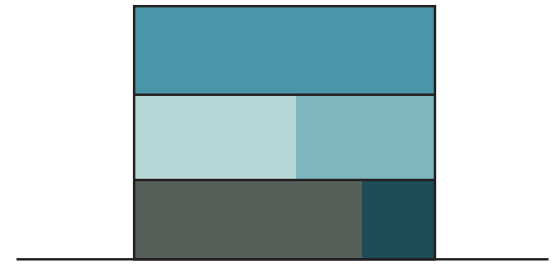
Assembling of functions



Horizontal mixed-use



Vertical mixed-use

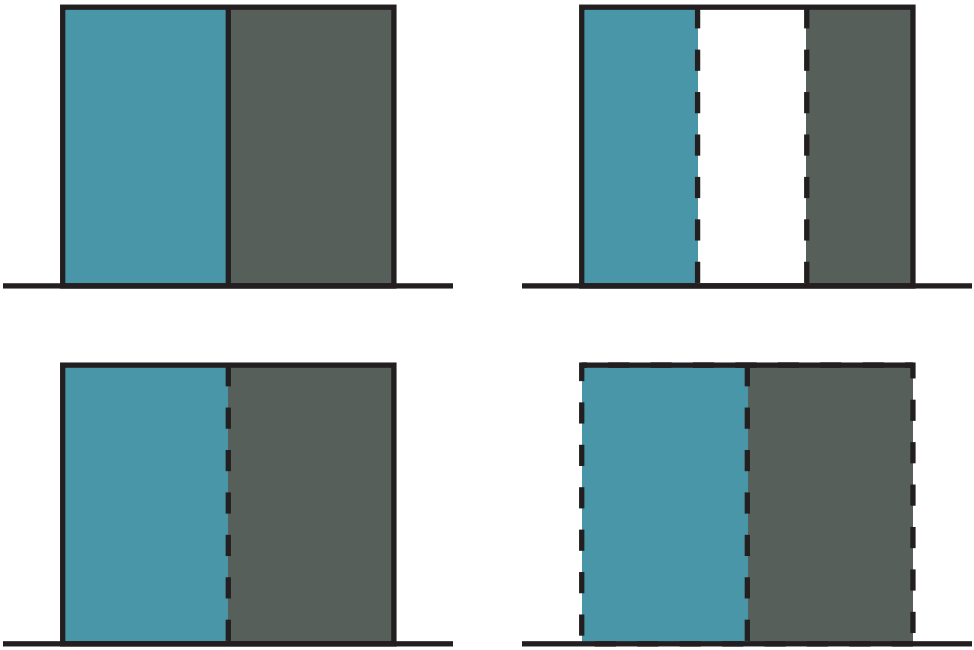


Horizontal and vertical mixed-use

Mixed-use

Functions can be mixed in a horizontal or vertical way or a combination of the two spatial principles. Horizontal mix use means that various functions are mixed on one floor level, however all floors that are stacked on top have the same organization of functions. Vertical mix use is the opposite where functions one storie of a building is used for only one function and levels above are used for another function. These to can be combined to create a mixed use program in both a horizontal and vertical way.

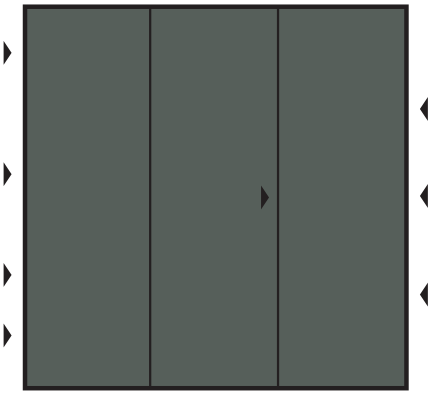
Other strategies of the assembling of functions relates to the spatial layout of the building. Functions can be assebled back to back of a block with entrances on the exterior, around a courtyard or along a public accessible passage.



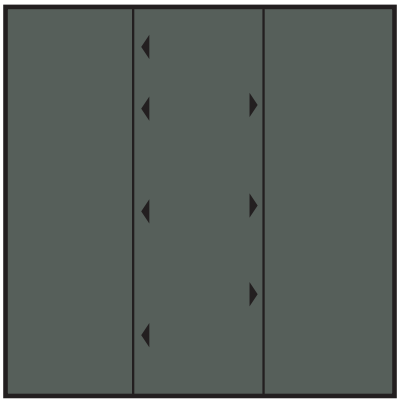
Relation between functions

Not only the mix of functions influence the public character and the use of the public accessible spaces. Also for the interrelationship between functions various strategies can be applied. The interrelation is also dependent on the choice of program. A first strategy is to implement two uses that function independent from each other, for example with offices and dwellings. Another strategy is to implement functions that can benefit from each other. This is visible when collective spaces for one or multiple functions are added to the program, so multiple users have the possibility to make use of the same space. A third strategy is to implement functions that not only function for the building and users itself but also for its surroundings. This mix of functions even attracts more people to the building and also requires for different strategies for the other focus points. Creating relations between functions enhances the public accessibility of shared spaces or entrances.

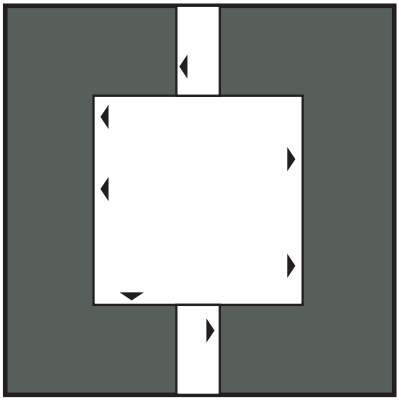
Entrances to functions



Most entrances oriented towards public space



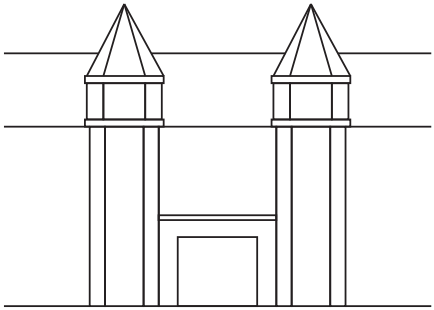
Entrances assembled along public interior passage



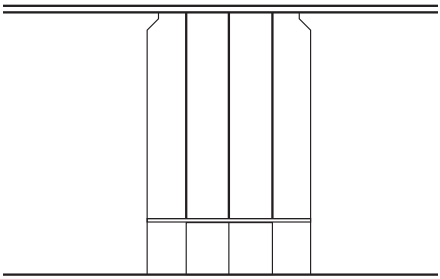
Entrances assembled around courtyard

Location of entrances

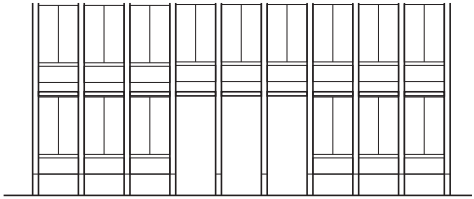
Related to the assembling of functions, are the strategies of the location of the entrance to the assembled functions. Those two aspects together influence the use of the public accessible space. If users of multiple functions share a public space or use the same entrance area for example, the social interaction between various users and groups of people is stimulated. This improves the possibility of spontaneous encounters and meeting people. Related strategies are the assembling of entrances around a courtyard or connected to the public interior space. Another strategy is to use the public accessible space mainly as routing and shortcut through the building, while the entrances to functions are located on the exterior facades.



Existing monumental



New recognizable

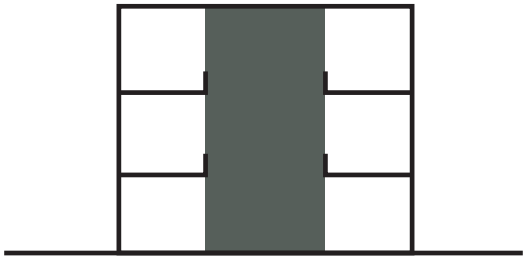


New in line with existing

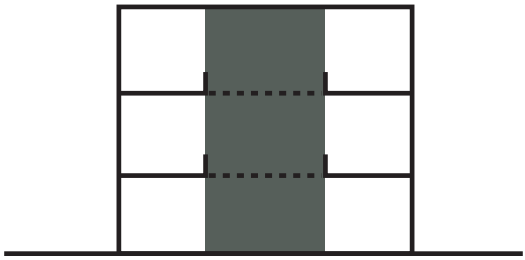
Design of entrances

Not only the design of entrances to the urban block influences the public character of interior spaces, also the entrances to the functions within the building has it influences. The strategy for this focus point are quite similar to the strategies for the entrances to the urban block. In some cases, existing entrances have been used as entrance to a function in a building. If new entrances had to be created, they can be designed in a recognizable way with a larger intervention to open up a part of a building or building volume to enhance this public character. In other cases the new entrances follow the rhythm or design of the existing with a slight difference in use of material or openness to indicate the new parts or interventions.

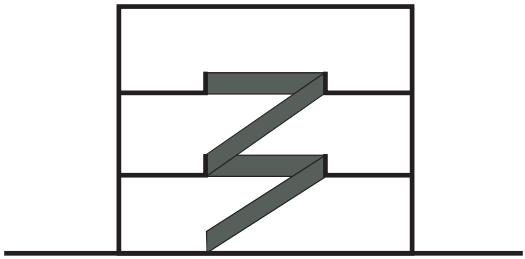
Atrium & Void



Existing void or atrium



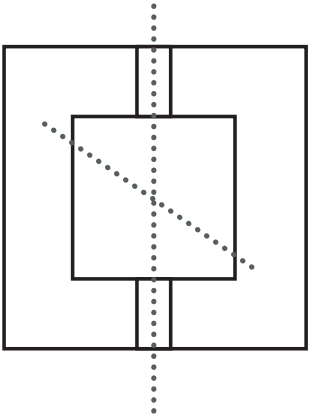
New void or atrium



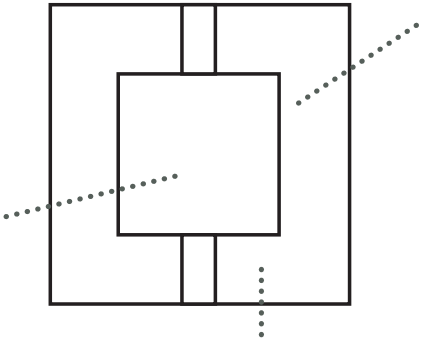
New void or atrium combined with vertical circulation

A similar approach as for the entrances can be seen in relation to creating atria and voids. Some of the building analyzed already had a space that could be seen as an atrium. In the case of the Hermitage and Blokhuispoort, the courtyards can be considered as atrium. This however is enhanced in both building by other spatial aspects, such as the location of circulation space in the Hermitage and the location of entrances in case of the Blokhuispoort. Also in case of the Neherpark, courtyards were already present, however new voids are created in the laboratory volumes by opening up the middle part of the volumes. In case new voids or atria are created, those are often combined with new staircases in the entrance area of a building to create the new central spaces of a function. In some cases some sort of voids were already present that have been maintained. Also the new voids and atria are closely related to the incoming daylight. Creating such spaces in the entrance area allow for more natural light in the entrance area of the buildings.

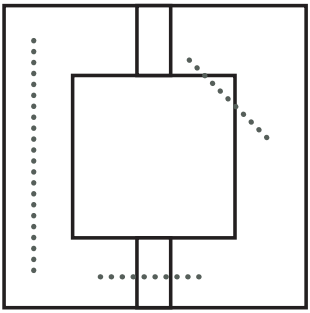
Visual connections



Courtyard for visual connections



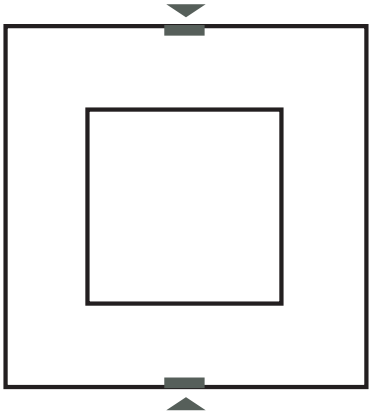
Visual connections to exterior



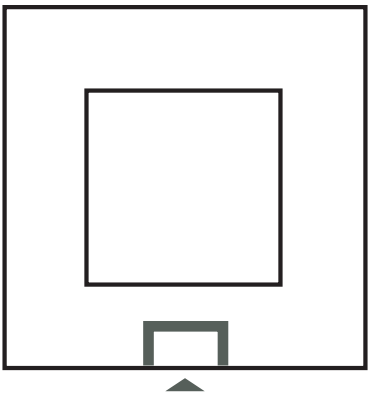
Interior visual connections

The visual connections are related to the use of atria and voids in the building, while such spaces created both physical and visual connection between floors. Therefore the courtyards that also function as central space also create visual connection between multiple wings or parts of the building even when located on different floors. Opening up parts of the facades also helps in creating new visual connections between the interior and exterior. Creating such openings allows for views to public functions so, people can see what is happening in the public accessible spaces of the building and also recognize that those spaces are accessible. Openings lower the boundaries between the public and private domain. Also on the interior visual connections between various building parts or functions enhance the public feeling of spaces. Those visual connections also help for navigating in the building while they can already provide a view to another function that is around a corner for example. Similar to the voids and atria, such connections can already be present or they are created by new openings in the façade or interior walls.

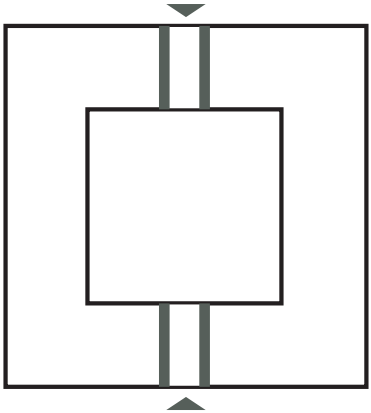
Security



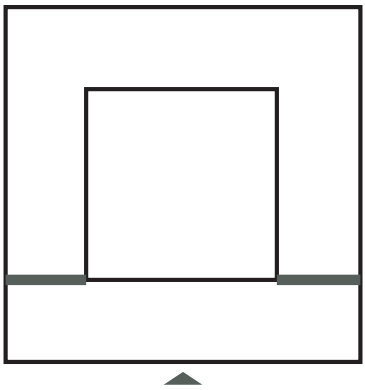
Security at boundary interior exterior



Creating entrance area / foyer



Maintaining public route

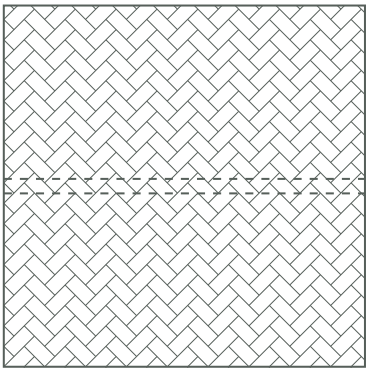


Public accessible part of building

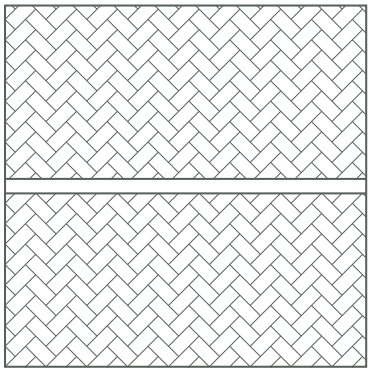
Location of security features

The location of security features influences the feeling of the public character of an interior space. The security features can be visible in the form of security cameras or security guards at spaces but it also relates to the point where a ticket is needed in a museum for example or the location where a key is needed to open a door in the case of an apartment building. A first strategy, that is mostly visible in relation to housing is a locked door separating interior and exterior. During the Covid-19 restrictions this situation was also visible for museums while visitors had to show their QR-code already at the entrance. A second option is to locate those locked doors or ticket scans further in the building to create a public accessible foyer, entrance area or passage. A third strategy is to position those features in a way that a public route can still emerge through the building. The last option is to position the security features in a way that they are out of sight when entering the building as has been done in the Hermitage museum. In this way the public feeling of the space increases.

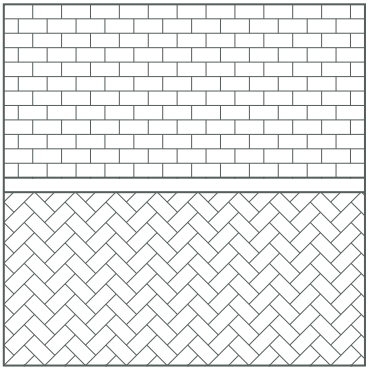
Materialization



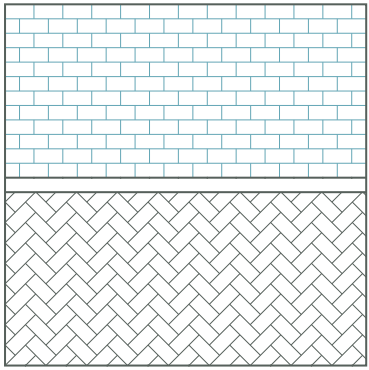
Continuing material



Continuing material with border



Differences in material or patern



Differences in material, patern and color

Materials to create borders

The materialization of spaces influences the public character or feeling of spaces and helps in creating borders and transitions between public and private. Various strategies can be concluded from the case study analysis. The first strategy is a continuation of the material between two spaces without a visual border. This strategy is applied in the case of two spaces that do not need to be closed off from each other. In the second strategy the material of the public space continues into the public interior, however a minor border is created by a frame for a door for example. In the third strategy a different bond for the same material or another material is applied in the public interior space, this creates a border between the two spaces. The fourth strategy is to use a completely different material in a different color or pattern to indicate the different character of spaces. In general, hard materials like stone and pavement have a more public feeling than softer materials like carpet, polished concrete or wooden finish. So using a hard material similar to the surrounding public space enhances the public character of a public interior.

Conclusion

Several observations of the closed character of the Koudenhorn building in Haarlem and its disconnection with the surrounding public space led to the question how this building would work if it would have a public use and what interventions would be needed to establish this public character. This led into a literature research on the topics of public interior spaces, public space and porosity of buildings.
Meeting is the most important reason for the existence of public interior spaces and is even part of the existence of cities while people need social interaction. Those public interior spaces are covered or in another way enclosed spaces that are publicly accessible and hence play a role in the urban structure of a city.
The literature on various topics and scale levels resulted in eight architectural focus points that influence the public character of enclosed spaces. Those eight focus points are embedding in the city and especially the connection with the pedestrian network, the location and the design of entrances, the use of atria and voids and related to this the natural light and visual connections, the use and location of security features and the interior design with a focus on the materialization.
Those focus points have been analyzed in six case studies resulting in multiple strategies that can be applied during the design process. The various strategies can be tested during the design and also work as a way to reflect on the design. Important for the strategies is that they indicate options for each individual focus points, but those focus points are also closely related to each other to make a public interior work in the end. Most important for the functioning of a public interior is the presence of people, so if people are not present, other interventions do not work as well.
The interrelation between various focus points becomes clear when looking at the location of entrances and the embedding in the city for example. When entrances are located along the public interior space, such as a courtyard or passage, the passage is not only circulation space through a building, but also becomes a space where multiple users of a building can meet each other.

When dealing with existing building, which can be listed as monuments, the existing situation and the valuable attributes of the building influence the choice for a strategy as well. Some strategies are harder to apply to an existing building than in the case of a new building. In some existing building the architectural elements are already present or were present, but when used in another way can influence the public character, such as the use of an existing courtyard as atrium for a building. The value assessment indicates the opportunities for interventions to enhance the public character of an existing building and is therefore important to take into account. For future research it could be helpful to also take the value assessment into account during the case study research to see how architects dealt with the values of a building when opening them up for their new public accessible functions.

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