De Gracht

Research Report | On quality and value of healthcare in the historic inner city of Amsterdam

Jan Bolhuis | 1502352 | Heritage & Design | June 1st, 2015 | Tutors: Lidy Meijers & Frank Koopman

“Word dan pas verpleegster, als ge ernaar verlangt;
als ge U “geroepen” voelt zieken te helpen en begrijpt,
dat ge in de ziekenkamer vol van Uw zieken,
leeg van Uzelf moet zijn.”

Het eerste van de tien geboden voor verpleegkundigen van zuster Melk,
De Praktijk der Ziekenverpleging, 1949

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1 Preface

> *"The noblest architecture can sometimes do less for us than a siesta or an aspirin … Even if we could spend the rest of our lives in the Villa Rotunda or the Glass House, we would still often be in a bad mood."*
>
> ALAIN DE BOTTON, THE ARCHITECTURE OF HAPPINESS

Architecture can do a lot with us (Pert, 2014). It can strike us with its beauty or amaze us with its variety. It can make us feel like children who have just discovered something for the first time. Architecture can trigger memories and emotions. But architecture cannot heal us.

The hospital of the twentieth century is close to an industrial mega-structure, not related to any human scale and resisting emotion. It is a factory, turning ill people into healthier ones. But it lacks relation with its patients.

However, there is evidence of room for a new type of building. There may be space for a building that can serve as an interface between the city, the mega-hospital and the human. The Prinsengracht Hospital in Amsterdam could be such a building.

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2 Introduction

This research focuses on the Prinsengracht Hospital, built in the 19th century and situated in the middle of the Canal Belt of Amsterdam. It has been conducted by Jan Bolhuis as part of the Graduation Studio Heritage & Architecture (MSc Architecture, Urbanism & Building Sciences, Delft University of Technology).

2.1 Problem Statement

The Prinsengracht Hospital has been regarded as a very pleasant hospital to stay in. Its development started in 1857 when J.H. Leliman designed a new building for the Vereeniging voor Ziekenverpleging. This building was not intended to be a hospital: it was a school for nurses. Some patients could be taken in, but there was no actual treatment going on in the building.

Following the trends in medicine (Wagenaar, 2015), the focus of the organisation slowly shifted. Instead of just offering *care*, the Vereeniging started to offer *cure* as well. The construction of the first purpose-built operating theatre in 1886 demonstrates this ideal. Over the course of years, cure became more important – in fact, the construction of a brand new surgery department in 1923-25 shows that *cure* had become the leading goal, and *care* a secondary aspect.

When the Prinsengracht Ziekenhuis and the Onze Lieve Vrouwe Gasthuis merged in 1994, the complex became a day-care centre, offering cure, but no longer care. Over the course of 140 years, the scope of the organisation had changed completely. Moreover, the building, which had been specifically developed for one purpose, was no longer used for that purpose. In other words, there was a mismatch between the building and its use.

Especially in the twentieth century, medicine developed rapidly and all hospitals had difficulties to keep up with new technologies. In most instances, old hospital buildings were abandoned in favour of new construction in the outer districts of the city. By staying in the prestigious buildings in the city centre, the Prinsengracht Hospital preserved a certain quality, but also created many problems. These problems became so big that maintaining the complex for hospital purposes is no longer feasible. Currently, the Prinsengracht Hospital is 1) huge, 2) introvert, 3) specifically designed and built for a health-related function, 4) outdated, 5) in disrepair, and 6) currently vacant.

2.2 Research Question

The main question dealt with in this report is the following:

> **To which extent did architectural aspects contribute to the positive experiences and user-friendly atmosphere of the Prinsengracht Hospital, and how can they be of use in the redevelopment of the complex?**

In order to come up with a satisfying answer to this question, there is a number of secondary questions:

> **How has the Prinsengracht Hospital developed and how does this relate to developments in the medical world?**
>
> **What determines *user experience* and how can the effects be measured?**
>
> **To which extent does the building meet contemporary demands for care-related use, and which types of healthcare could be accommodated?**

By answering these questions, I hope to achieve a useful basis for an elaborated design.

2.3 Method and structure

The development of healthcare in the Netherlands, including contemporary views, is discussed in chapter 3. Attention is also paid to the redevelopment of abolished hospital premises. With this as a backdrop, chapter 4 focuses on the Prinsengracht Hospital. The development of the Canal District and the hospital itself is explained, and the current situation is described. Also, recent initiatives for possible interventions at the site are listed.

Chapter 5 contains the results of assessments of the user experience. Several sources and methods are utilised. In chapter 6, a summary of several important characteristics of the Prinsengracht Hospital are shown in diagrams.

In chapter 7, forensic psychiatric healthcare is discussed as a possible new use for the Prinsengracht Hospital. Part of this separate research is based on interviews with providers of forensic care and architects with experience in the field. The overall conclusion of the report can be found in chapter 8.

3 History of Hospital Design

This chapter deals with hospital design in general. The first paragraph contains a brief overview of the developments in healthcare since the nineteenth century. In the second paragraph, the consequences of shifts in healthcare for the architecture of the hospital is discussed. The last paragraph puts forward the status quo in healthcare design, elaborating on popular terms such as 'Healing Environment' and 'Evidence Based Design'. Several representative examples are shown in each paragraph.

3.1 Trends in Healthcare since the 19th Century

In the nineteenth century, life expectancy was significantly lower in the cities than it was in the countryside. The smelly, polluted air in the cities was considered to be unhealthy, and the fresh air of 'the outside' was seen as a means of purifying. This was also the main concept of the hospitals of the early nineteenth century: the hospitals cured people by offering a healthy environment, not by medicine (Wagenaar, 2015).

FIGURE 3.1 - THE ZONNESTRAAL SANATORIUM IN HILVERSUM. IMAGE: WWW.BIERMANHENKET.NL

Among the most distinctive examples are the sanatoria, which became increasingly common from the late nineteenth century (English Heritage, 2011). Tuberculosis, for example, was a severe killer in the nineteenth century, but could not effectively be cured until streptomycin (an antibiotic) was discovered in the 1940's. Even in the first half of the twentieth century, treatment of tuberculosis was basically an attempt to keep the infection under control.

A famous Dutch sanatorium is the Zonnestraal Sanatorium in Hilversum, which opened in 1928. The complex is situated in a very green, open environment and was designed to integrate the residents with their natural surroundings (Campbell, 2005). It remained in service even until 1957, when it became a regular hospital.

Sanatoria are, however, an exception. Most hospitals were situated in an urban environment, and had to deal with the polluted air. For this reason, many hospitals were constructed using the pavilion system (Wagenaar, 2015). Pavilion hospitals consisted of several buildings or wings, with lots of open space around them and often interconnected by covered walkways or corridors. Hospitals were usually intended for the urban poor: wealthier people were commonly treated at their homes.

In the cities, especially port cities, major pandemics occurred every so often, sometimes killing a large part of the population. The understanding that poor hygiene and pollution contributed to the spread of diseases, lead to a hygienic revolution in the course of the nineteenth century (Wagenaar, 2015). Sewage systems and fresh water supplies were constructed and made available to the public, causing the cities to become much cleaner, preventing diseases and greatly increasing life expectancy as a result.

FIGURE 3.2 - THE OPERATING THEATRE OF THE PRINSENGRACHT HOSPITAL IN 1906. IMAGE: BEELDBANK AMSTERDAM

Three trends emerged in the medical world (Wagenaar, 2015). The first is the identification of bacteria as a cause for diseases, which had a twofold effect. Not only did people understand better how to prevent contamination and spread of diseases, but it was also possible to develop medicine.

Secondly, surgery was re-integrated in the medical world. The discovery of anaesthesia meant that surgery no longer needed to be painful, and improved understanding of infection control greatly reduced the risks of complications. Around the beginning of the twentieth century, special surgery rooms became more and more common in the larger hospitals.

The third trend is the introduction of medical technology. For example, X-ray made it possible to take a look inside a living human body, which was a great asset for doctors.

As a result, the role of the hospital changed significantly. Instead of just offering a healthy environment, the hospital became a medicalised, technology-focused centre for healing. This was visible in a very rational and compact architecture, especially from the 1950's. A side effect was that

these specialized institutions became the only place where seriously sick people could get better. The hospital was no longer a charitable institution for the poor, but became a healing place for those who could afford it.

As the population and productivity grew and the economy was booming, the welfare state was introduced: public health for all people. Hospitals had to cope with growing amounts of patients. The buildings had to be very large and very efficient. This trend led to new types of hospitals, of which the Breitfuß-typology is a common example (Mens & Wagenaar, 2010).

3.2 Development of Hospital Architecture

From the nineteenth century up to the 1930's, typical urban hospitals were constructed in brick, with relatively thick load-bearing facades, high rooms and exterior sun shading. The windows were often relatively small, especially in comparison to hospitals from the 1950's (Hiltermann, 1969). The Prinsengracht hospital – or at least, the wings that were constructed up to 1923 – clearly show the same characteristics.[1]

FIGURE 3.3 - THE LEYENBURG HOSPITAL IN THE HAGUE (ARCHITECTENBUREAU K.L. SIJMONS, 1971) IS AN EXAMPLE OF THE 'BREITFUß' MODEL. IMAGE: WWW.BING.COM/MAPS (ACCESSED 24-03-2015)

In the years after the war, the entire building industry was modernised. Where possible, standard solutions were applied, also in hospital architecture (Mens & Wagenaar, 2010). Well-known examples are the five 'Wiegerinck Hospitals', which were all designed by architect Wiegerinck and his partners. The hospitals are not exactly identical, but they do feature the same programme and illustrate the ideal of a universal hospital building that could be placed anywhere.

The Wiegerinck hospitals are of the Breitfuß typology. Breitfuß hospitals consisted of a low-rise base which housed all dynamic functions, and a high-rise tower with the static functions, such as the patient rooms (Wagenaar, 2015). The aim of post-war hospital design was to achieve modern buildings with curtain facades, reduced storey heights, less space per patient or member of staff, and relatively large windows (Hiltermann, 1969). Interior shading was applied to keep out solar heat.

[1] It should be noted that the windows in some rooms, especially the operating rooms on the third floor, are larger or have been enlarged in renovation works.

As Hiltermann points out in his chapter on the interior climate, the hospital architecture from the 1950's offers a less stable interior climate. The large windows without exterior sun shading allow much heat to enter the patient's room, and the relatively light construction has a low thermal capacity. He shows that the interior temperature is nearly always higher than the exterior, up to a very uncomfortable 32°C.

The solution that the author comes up with, is characteristic for the 1960's approach to hospital architecture. The authors of the book assumed that modern technology will provide a solution to the problems that post-war hospitals face (Gulick, 1969). They stated that modern technology would make it possible to design entire buildings without any openable windows: a central mechanical ventilation system should be capable of supplying all the fresh air and temperature control the patients need. The patient could (or had to) control less and less aspects of his stay in the hospital.

In the 1970's however, people became more critical about the modern hospitals (Wagenaar, 2015). Patients felt as if they were no longer treated as a person, but as a number. Even though diseases are a personal experience and a very normal part of our society, hospitalized patients felt separated from that society and had to follow the strict rhythm of the hospital (Wagenaar, 2005). Hospitals had evolved into enormous healthcare factories, with no relation to the human scale.

A second point of critique was that hospital complexes had very little relation with their surroundings. The huge, introvert constructions, usually in an urban setting, had a negative impact on their direct environment (Wagenaar, 2015).

Consequently, architects have tried since the 1980's to design their hospitals in such a way, that the users will experience their environment as pleasant and comforting. This proved to be a difficult challenge, because these users can be divided into three groups: the patients, the staff, and the visitors. Combining the sometimes competing needs of these main groups of users, makes the design of this environment a difficult task. For decades though, hospitals were built for patients and staff only, neglecting the needs of hospital visitors (Fornara, Bonaiuto, & Bonnes, 2006).

3.3 Modern Hospitals and the Healing Environment

For hospitalised people, there are three factors that influence their experience: the quality of healthcare, the way they are treated by staff, and the (built) environment (Bovenberg, Takkenkamp, Vennik, & Francken, 2010). Obviously, it is not the building itself that cures diseases, but it is possible for a building to offer a pleasant atmosphere and even to influence the behaviour of its visitors (Patijn, 2003). A healing environment can be defined as follows:

> *A healing environment is such an environment that contributes to the sense of well-being, recovery and, ultimately, healing.*

This definition seems rather vague, but there is a simple explanation. There are many possible ways to improve people's sense of well-being, and many different environments can be envisioned that, in one way or another, contribute to the healing process.

The term 'Healing Environment' emerged in the Netherlands in the 1980's (Bovenberg et al., 2010), following the research by professor R. Ulrich at the Texas A&M University. This research demonstrated that bedridden patients healed significantly better, and could leave the hospital sooner, if they had a view of the landscape instead of a blind wall (Ulrich, 1984). Follow-up research has been conducted for a variety of characteristics of the built environment, and it is now commonly

accepted that the built environment has a significant effect on people's health (Evans & McCoy, 1998).

It is, however, more difficult to pinpoint the exact aspects of the built environment that actively influence experience. There is scientific proof that, among others, sunlight, windows, smells and furniture arrangements can have an effect (Dijkstra, 2009). Factors such as sound, natural elements, spatial lay-out and colour are also presumed to affect experiences, but no convincing scientific experiments have been conducted (Bovenberg et al., 2010). Moreover, every patient is different and therefore every patient's ideal environment will be different as well. Even so, it is possible to name a number of properties that characterise a healing environment.

Starting Points for a Healing Environment
Aim for quietness, safety, quality and reduction of stress
Friendly reception
Clear lay-out for easy orientation
Variation
Natural atmosphere, through use of materials and colour palette
Much daylight and contact with the outside world
Reduced noise levels

TABLE 3.1 – STARTING POINTS OF A HEALING ENVIRONMENT (BOVENBERG ET AL., 2010)

Several hospitals in the Netherlands have tried to adopt these starting points, in an effort to make their interior environment as user-friendly as possible. One example that was internationally recognised for its integral approach, is the new East Wing of the Martini Ziekenhuis ('Martini Hospital') in the city of Groningen, designed by Burger Grunstra Architecten[2] in 2007.

FIGURE 3.4 - THE EAST WING OF THE MARTINI ZIEKENHUIS IN GRONINGEN. IMAGE: WIKIMEDIA COMMONS

The newly constructed east wing of the Martini Ziekenhuis features much space around the building, and has a specifically designed garden in the enclosed courtyard. It has a comprehensible lay-out and features abundant large windows, resulting in a bright and warm interior where daylight and even sunlight are cleverly utilised. The double façade on the side of the Paterswoldseweg – a relatively busy traffic road – reduces noise levels (Bovenberg et al., 2010).

[2] Since 2010, the office is called SEED Architects. See www.seedarchitects.nl

The most striking feature of the new wing is found in its interior, which was designed by Vos Interieur and features a bright colour palette by artist and colour expert Peter Struycken[3] (De Architect, 2007). Advised by Struycken, the architects chose 19 colours that are complementary and can be combined, including five neutral tones for the floors and walls. The colours appear to be applied throughout the building at random, but are in fact determined by a fixed matrix that the architects developed.

FIGURE 3.5 - THE COLOURFUL INTERIOR OF THE MARTINI ZIEKENHUIS IN GRONINGEN. IMAGES: WWW.VOSINTERIEUR.NL

The hospital is designed to be changed: all furniture systems by Vos Interieur can be reassembled in several ways, and separation walls can easily be moved in order to combine, separate or change existing rooms (De Architect, 2007). The colour scheme does not have to move accordingly: since the colours are complementary, they can be visible side by side on the same wall. Regardless of changes in the floorplans in years to come, the qualities that determine the interior spaces will be maintained (De Architect, 2008).

[3] Struycken also developed the colour scheme for the extravagant Groninger Museum in the 1990's

3.4 A New Life for Old Hospitals

Medical technology has developed so rapidly that most hospital buildings cannot accommodate all necessary changes, and will, in time, be replaced. In these instances, the existing complexes become vacant. Despite their specific design characteristics, the old hospitals and the grounds they are on provide opportunities for large-scale redevelopments.

In nineteenth-century Amsterdam, there were two large hospital areas: the Binnengasthuis inside the historic city centre, and the Wilhelmina Gasthuis, just outside of the centre. Both sites were abolished following the construction of the AMC from 1973 onwards.

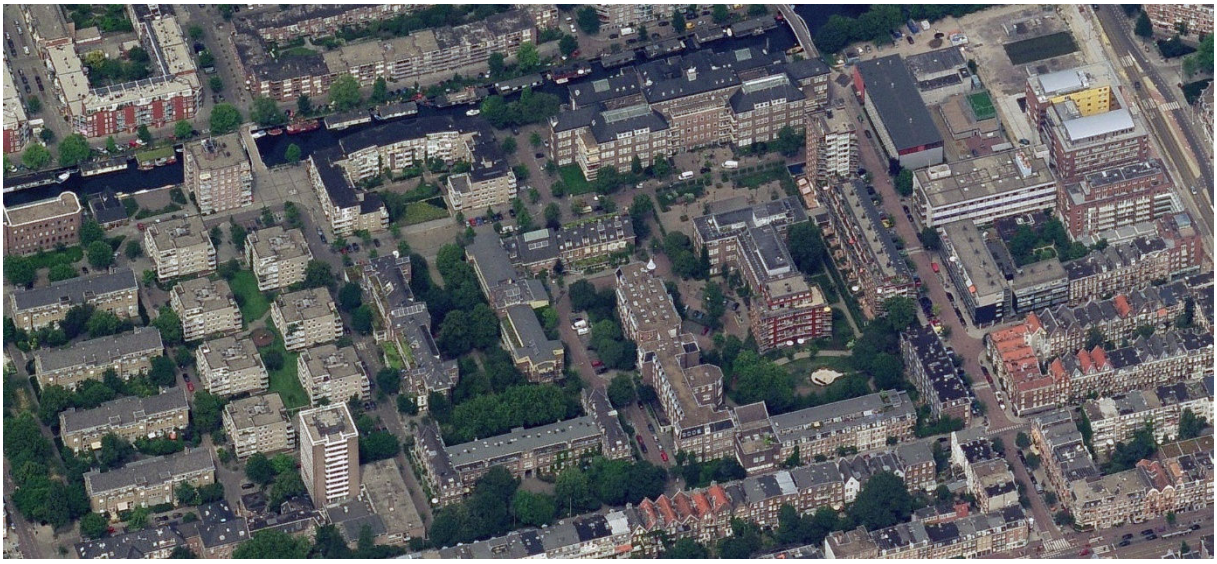


FIGURE 3.6 - THE FORMER WILHELMINA GASTHUIS TERRAIN. IMAGE: WWW.BING.COM/MAPS (ACCESSED 12-5-2015)

In the case of the Wilhelmina Gasthuis, discussions about a new function went on for years. Some of its former pavilions were demolished. Local residents protested and started a foundation to prevent further demolitions and to renovate and refurbish the buildings for residential and (art) business purposes themselves (Woon- en Werkvereniging WG-terrein, 2014).

FIGURE 3.7 - VIEW OF THE TWEEDE CONSTANTIJN HUYGENSSTRAAT (LEFT) AND THE FORMER SURGERY BUILDING, CURRENTLY A BUSINESS COMPLEX (RIGHT). PICTURES BY AUTHOR, 11-5-2015.

A number of residential buildings was erected on the premises, but the WG-terrain is still a very open and green place in the middle of the city. Its courtyards are quiet and peaceful and feature

playgrounds for children and small bars and shops, supported by the local community. In a way, the Wilhelmina Gasthuis feels like a village rather than a city district. The leading principle of its original pavilion structure is still present and valid.

FIGURE 3.8 - VIEWS IN THE COURTYARDS OF THE WG-TERRAIN. PICTURES BY AUTHOR, 11-5-2015.

The Binnengasthuis area is located within the old centre and has a more urban character. It will be developed into an Inner City Campus by the University of Amsterdam. Several of their facilities have been located on the site for years.

4 The Prinsengracht Hospital

In this chapter, the Prinsengracht Hospital itself is discussed. The chapter starts with a small introduction to the city centre of Amsterdam, and the role that the UNESCO World Heritage Status plays concerning building activities in the protected cityscape. The entire development of the hospital itself is explained, from the first idea in 1853 until the moment the premises were sold in 2014. Finally, the current situation is assessed and clarified in pictures and text.

4.1 The Canal Belt of Amsterdam

Amsterdam has its origin in the twelfth or thirteenth century, when it was a small fishing village at the point where the Amstel River meets the IJ (UNESCO, 2010). In 1306, Amsterdam – the name is derived from the dam that was built in the Amstel River – was proclaimed a city, and it became an important centre for maritime trade in the following centuries. At the end of the sixteenth century, the city ran out of space within its defence line – the Singel – and a vast expansion project, both for urban growth and for defence, was carried out.

This expansion, currently known as the Canal Belt, was constructed in two phases in the sixteenth and seventeenth century. The Belt consists of three main canals. From the city centre outwards, these are the Herengracht, the Keizersgracht, and the Prinsengracht. Given that Amsterdam was a very prosperous city, the Canal Belt was not just built to be functional, but to be beautiful and representative (Henket & Partners Architecten, 2009). This is illustrated by the wide, open canals, the large plots and the presence of many trees along the canals.

There was a strict urban plan, determining the width and depth of the plots, and the permitted uses of the land. However, outside of the outermost canal, the Prinsengracht, this regular planning did not apply. As a consequence, the Jordaan district simply follows the existing farmland plot boundaries.

The orderly growth of Amsterdam became a reference urban model, and the example would attract attention as an image of an ideal city in all of 18th-century Europe. The system of canals, locks and dykes that prevented the city from flooding, was deemed a masterpiece of civil engineering and would inspire builders from all sorts of countries (UNESCO, 2010).

By the end of the eighteenth century, the prosperity of Amsterdam was declining. Several projects were carried out in the nineteenth century to improve the city's competitive position, but the port did not again achieve the amount of traffic of the port of Rotterdam (UNESCO, 2010). At the same time, the population was growing and a trend emerged to convert disused warehouses into apartments. Office buildings and other services were erected, usually in harmony with the existing buildings in terms of scale, materials and architecture.

As Amsterdam became more important as an administrative and financial centre, larger buildings were constructed, such as the Rijksmuseum and the Central Station, the latter definitively blocking the city centre from the IJ.

In the Second World War, around 100.000 Jews – many of them living in the canal districts – were deported from Amsterdam. The war caused minor material damage to the city (UNESCO, 2010). After the war, large-scale developments have been carried out: canals were filled and streets widened to make room for cars and trams, and several relatively large office buildings have been constructed (Schoonenberg, 2004). The developments also included growing amounts of retail shops and tourism-related functions.

In the summer of 2010, the Canal Belt was inscribed as a UNESCO World Heritage Site (UNESCO, 2010), because of its 'Outstanding Universal Values'. It was nominated for three out of six criterions (Gemeente Amsterdam, 2009):

- To represent a masterpiece of human creative genius;
- To exhibit an important interchange of human values … on developments in architecture or technology, monumental arts, town planning or landscape design;
- To be an outstanding example of a type of building, architectural or technological ensemble or landscape.

FIGURE 4.1 - THE CITY CENTRE OF AMSTERDAM. THE AREA IN BLUE IS THE CANAL BELT, AND IS THE CORE ZONE OF THE UNESCO WORLD HERITAGE SITE. THE ORANGE AREA IS THE BUFFER ZONE, WHERE RESTRICTIONS ALSO APPLY. IMAGE: WWW.RUIMTELIJKEPLANNEN.NL, ACCESSED 13-5-2015.

Moreover, the municipality has composed an elaborated Management Plan, stating how the OUV's of the inner city site will be managed and protected. The Management Plan contains several guidelines and restrictions for building activities in and around the heritage site, limiting the possibilities for

interventions in this area. It should be noted though, that the entire city centre was already part of a protected cityscape for decades, and that most of the restrictions mentioned in the Management Plan were already in place. In that sense, the inscription as a UNESCO World Heritage Site hardly comes with new restrictions. However, the threat of being taken off the list might make it more difficult to make exceptions to the existing rules.

The Prinsengracht Hospital is located in the Spiegelkwartier, a neighbourhood in the Canal District that currently houses many dealers in art and antiques (Henket & Partners Architecten, 2009). At the time that the hospital was constructed though, it was not a rich area at all. It housed many craftsmen in service of the wealthier Canal residents, and there were many warehouses and small shops. Only after the industrial revolution arrived and prestigious projects were carried out in the area, did the Spiegelkwartier achieve its current appearance. Especially the construction of the Rijksmuseum is likely to have influenced the area, as the main route towards it leads through the Spiegelstraat.

4.2 Vereeniging voor Ziekenverpleeging: development and expansion

On the 25th of July, 1843, the 'Vereeniging voor Ziekenverpleging' ('Union for Nursing') was officially founded (De Hingh, Van den Hurk, & Koelewijn, 2008). The founders were dissatisfied with the city's poor hygiene, the infectious diseases and the poor nutrition of its people. The goal of the Union was to found an organisation that could offer a decent education to recommendable women, to properly care for the sick. In the first years, the Union only offered homecare. From the beginning though, their intention was to found a proper education- and nursing centre: a hospital.

At the time, there were around twenty private hospitals active in Amsterdam (De Boer & Pley, 1993). However, the term 'hospital' is not entirely correct: they were organizations that treated patients at their own homes. Many did have a property of their own in the Canal Belt, but these were mostly regular houses that had been (often deficiently) modified. These buildings served as a home for the nurses, and only few 'hospitals' actually took in patients.

FIGURE 4.2 - THE VEREENIGING VOOR ZIEKENVERPLEGING, PHOTO 1858. IMAGE: BEELDBANK AMSTERDAM

In 1853, the Vereeniging decided to construct a proper hospital themselves, rather than buying an existing building. They bought four burnt-down warehouses along the Prinsengracht, and published a circular in order to raise the funds required for the new building (De Boer & Pley, 1993). Architect J.H. Leliman was asked to make a design, and he concluded that the available parcel was not wide enough. On his advice, the Vereeniging bought the neighbouring dye house, and in 1854, the warehouses and dye house were demolished. Construction of the new hospital started in 1855, even though the Vereeniging had not yet collected all the required funds. Despite financial difficulties, the hospital building was officially opened on the 11th of June, 1857 (De Hingh et al., 2008).

The symmetrical building offered space for a total of nineteen nurses and fifteen patients, not including a room for twelve to fifteen children on the ground floor. It is important to understand that the main goal of the building was not to heal the sick, but to educate nurses. In other words, the building offered *care* rather than *cure* – which stroked with medical practise at that time.

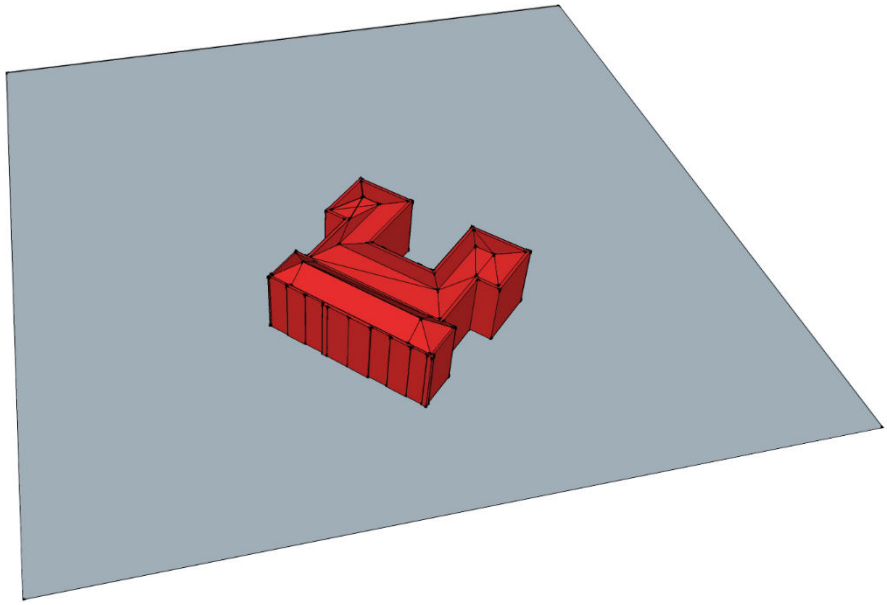


FIGURE 4.3 - THE THREE STORY HOSPITAL BUILDING AFTER ITS COMPLETION IN 1857. ILLUSTRATION BY AUTHOR.

The design by J.H. Leliman has a lot in common with the Coolsingelziekenhuis, a hospital that was opened in the city of Rotterdam a few years earlier. The Coolsingelziekenhuis was regarded as an excellent example of a modern hospital, and may well have influenced Leliman: he used arched windows, modern heating and ventilation systems, luxury bathrooms, gas lighting and several other elements in a very similar way (De Boer & Pley, 1993).

The building of the Vereeniging voor Ziekenverpleging has often been refurbished and expanded from the very beginning, in an ongoing effort to accommodate growth and to stay up to date. The first expansions were not visible from the Prinsengracht: the building expanded to the back. A new nurses' home ('zusterhuis') was erected on the Kerkstraat in 1872, following a design by architect G.B. Salm. The new building was connected to the north wing of the existing building, sacrificing a part of the garden. The expansion did not increase the patient capacity of the hospital: the new building mainly contained rooms for the nurses and the existing nurses' rooms were considered too small for the patients (De Boer & Pley, 1993).

FIGURE 4.4 - THE COOLSINGELZIEKENHUIS IN ROTTERDAM IN THE 1920'S. IMAGE: WWW.FLICKR.COM, ACCESSED 27-3-2015.

In 1882, G.B. Salm refurbished the existing building at Kerkstraat 126 to create more rooms for the nurses. This building was not connected to the other buildings, but it did have a back door to the existing garden.

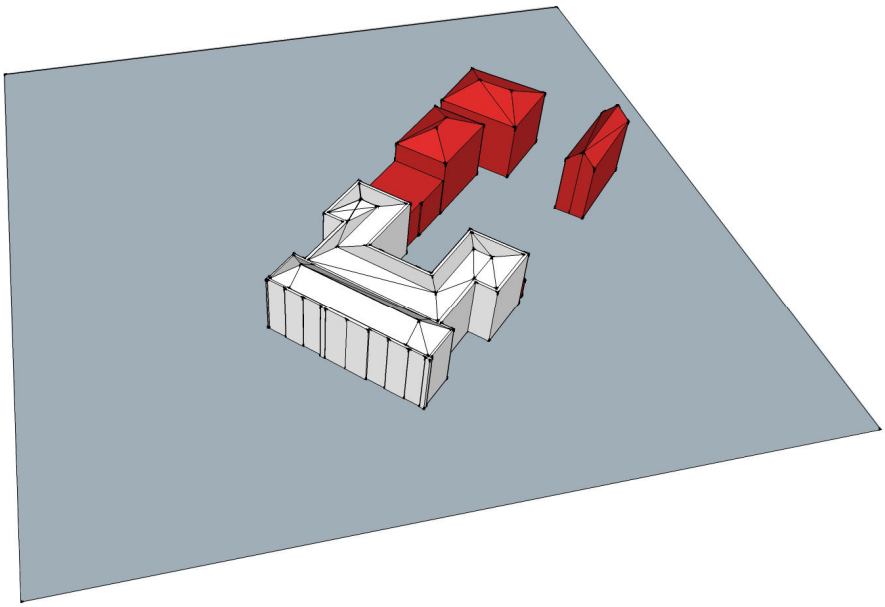


FIGURE 4.5 - THREE BUILDING PARTS ARE ADDED: THE ZUSTERHUIS THAT CONNECTS TO THE NORTH WING IN 1872 AND THE SEPARATE ZUSTERHUIS IN 1882, BOTH BY ARCHITECT G.B. SALM. ON THE SOUTH WING, AN OPERATING ROOM IS ADDED FACING THE GARDEN, IN 1886 (ARCHITECT UNKNOWN). ILLUSTRATION BY AUTHOR.

There was still no surgery or treatment room: just nursing for the patients. In rare cases, patients underwent surgery in the boardroom or even on their own beds (De Hingh et al., 2008).

In 1886, the children's room, that was hardly being used anyway, was expanded and transformed into the hospital's first purpose-built operating theatre (De Hingh et al., 2008). The operating theatre, facing the garden, was a huge improvement, but still not perfect: it lacked daylight from above, and the construction was sagging. By the end of the 19th century, asepsis became common and the operating theatre was already in need of an upgrade (De Boer & Pley, 1993).

This was a time where the role of hospitals in society changed significantly. There was a shift from nursing, at people's homes, to specialist treatment, which often required the patient to be at the actual hospital. It was also a time when the city of Amsterdam was expanding rapidly. Consequently, many hospitals moved to contemporary hospital buildings in the new districts (De Boer & Pley, 1993). The Vereeniging voor Ziekenverpleging on the other hand, expanded their existing building by incorporating the neighbouring warehouse on the Prinsengracht in 1890.

FIGURE 4.6 - THE VEREENIGING VOOR ZIEKENVERPLEGING IN THE 1890'S. IMAGE: BEELDBANK AMSTERDAM

Around the turn of the century, there was a fierce discussion in the board of directors. The hospital was considered too small and outdated, and it was clear that it would take a large investment to address all the issues. The main question was if such an investment in the old building was sensible, or if it was more desirable to sell the entire complex with all its annexes and to found a new hospital in one of the newer districts of Amsterdam. A third option that was taken into consideration, was to demolish the entire complex and to construct a new, modern building in the same place (De Boer & Pley, 1993).

The board decided to renovate and expand the existing buildings. Architect Posthumus Meyjes Sr. was selected for the design, and by 1903 the renovated complex was opened. Striking features of the design included the demolition of several building parts (some of which had only been constructed twelve years earlier), an extension of the Prinsengracht façade, an entire new floor on both the old and new parts on the Prinsengracht side, and the combination of the separate nurses' homes into one

'zusterhuis' on the Kerkstraat. From this time on, the hospital could accommodate up to 67 patients at a time.

FIGURE 4.7 - THE PRINSENGRACHT HOSPITAL IN 1903. IMAGE: WWW.BIERMANHENKET.NL

Only twenty years later, the same discussion re-emerged. The existing operating theatre was outdated and sagging so badly that local repairs would not suffice. As before, the board concluded that an expansion and renovation of the existing building was the way to go, and an entirely new surgery department, designed by Posthumus Meyjes Jr., was opened in 1925.

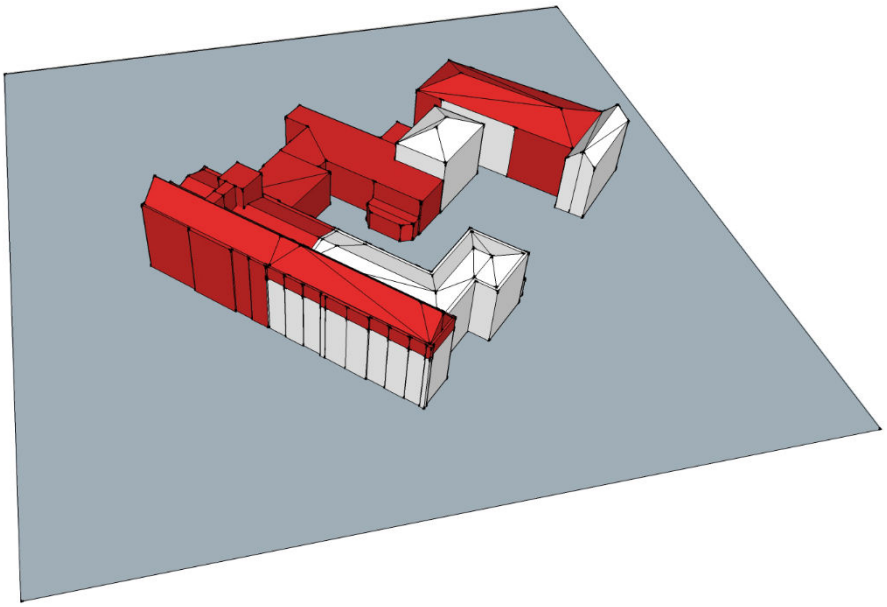


FIGURE 4.8 - LARGE EXPANSION AND RENOVATION (COMPLETED IN 1903). ILLUSTRATION BY AUTHOR.

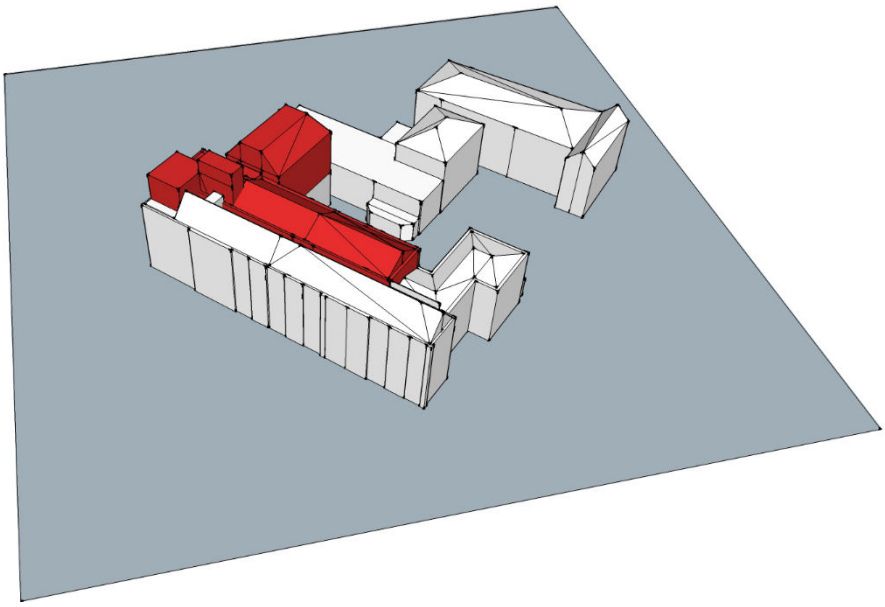


FIGURE 4.9 - A MODERN SURGERY WING IS ADDED IN 1923-1925. ILLUSTRATION BY AUTHOR.

The old building remained to be an issue, and the option of moving or reconstructing the entire hospital was always open. In 1937, the board decided to modernise the entire building once again – the refurbishment was finished in 1938. In 1944, several defects were found in the building, but they could not be addressed because of the war. There were ambitious plans to take over the nearby Boerhaave Kliniek or to build an entirely new 150-bed hospital, but they were not carried out. Instead, the X-ray department, laboratory and nurses' rooms were once again refurbished in 1947.

In the 1950's, staff still experienced the hospital as being small and aged, but there were no concrete plans. To be more precise, there was a desire to improve the situation, but there was a lack of budget. Despite the financial struggle, the ventilation and heating installations received an upgrade and a new boiler house was constructed in the garden in 1951, with a terrace on top.

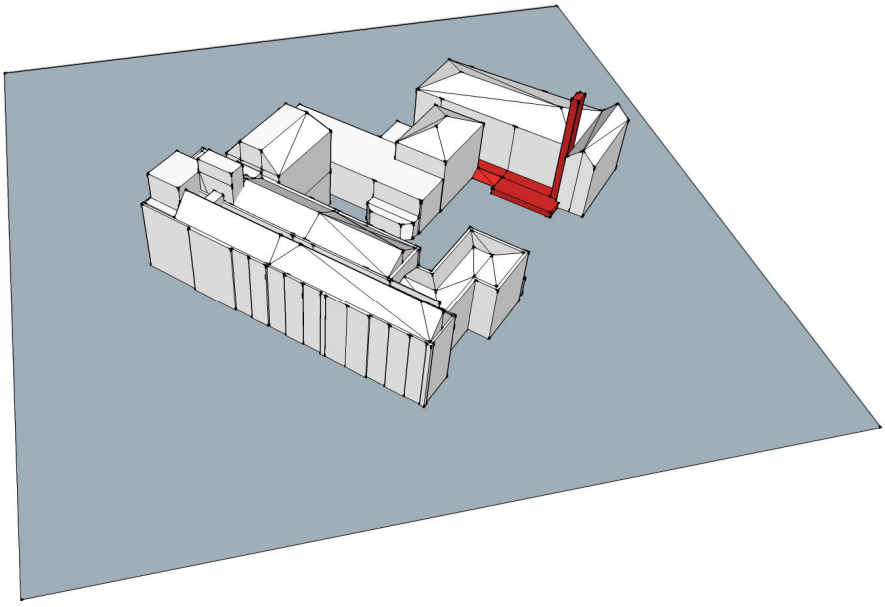


FIGURE 4.10 - A NEW BOILER HOUSE AND CHIMNEY ARE CONSTRUCTED IN 1951. ILLUSTRATION BY AUTHOR.

The amount of beds was too little for the organisation to be profitable, so an expansion was necessary once again. The demolition of two neighbouring buildings and the construction of a modern, concrete and glass wing in 1957-58 by architects De Geus & Ingwersen allowed for an increase to 100 beds.

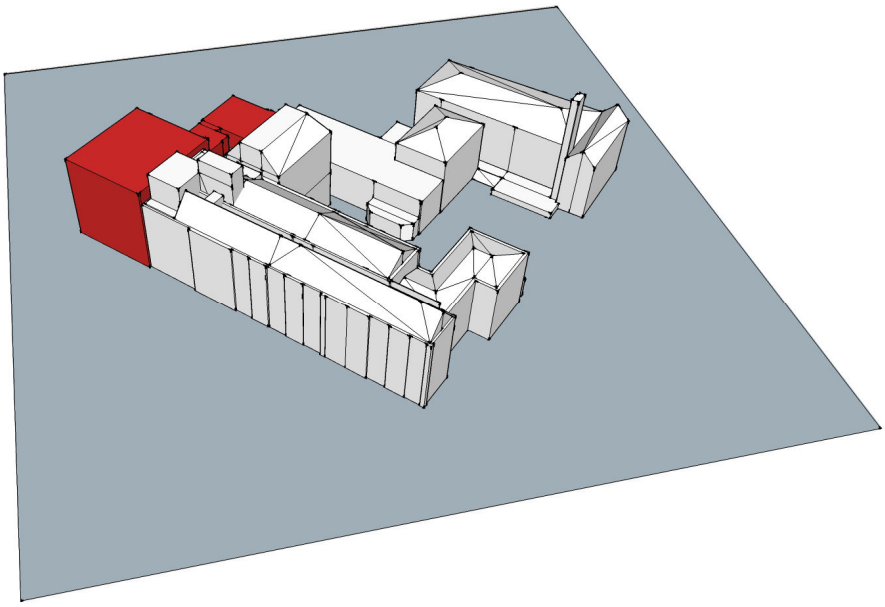


FIGURE 4.11 - A MODERN EXPANSION BY ARCHITECTS DE GEUS & INGWERSEN WAS ADDED IN 1957-58, 100 YEARS AFTER THE HOSPITAL WAS FIRST OPENED. ILLUSTRATION BY AUTHOR.

The city of Amsterdam quickly expanded in the 1960's. As before, large new hospitals were constructed in the new city districts, including the AMC (which opened in 1983). Several inner city hospitals, including the Binnengasthuis and the Wilhelmina Gasthuis, were abolished (De Boer & Pley, 1993). The tendency to expand and renew was also apparent in the board of directors of the Vereeniging: a majority of the board was in favour of demolishment of the entire complex, and construction of a large new hospital, including a parking garage and modern facilities, on the same site. The plan was turned down for financial reasons.

In the late 60's, it had become clear that the municipality would not allow any high rise in the city centre. In cooperation with other parties, including the Boerhaave Kliniek, plans were, once again, made to move to a new building elsewhere. Together, the hospitals made plans to merge into one new building on the current AMC site. Because there were doubts on either side, the plans were never carried out. Mergers with other hospitals were considered, but none actually took place.

As new construction seemed impossible, the board applied for a grant at the Ministry to refurbish and renovate their existing building at the Prinsengracht for *f* 1.500.000. The application was turned down in 1975. The College voor Ziekenhuisvoorzieningen ('Board for Hospital Facilities') even put the Vereeniging on their list of hospitals that were to be closed. Among other reasons, the intended reduction of the total amount of beds in Amsterdam was an important argument not to invest in the run-down hospital.

The Vereeniging celebrated its 140th anniversary in 1983, but its future was far from certain. By this time, there were only two hospitals left in the inner city: the Boerhaave Kliniek and the Vereeniging voor Ziekenverpleging. Although the secretary of state requested to close both facilities, the municipality of Amsterdam strongly expressed their wish to maintain at least basic healthcare

facilities in the city centre. The debate led to the conclusion that one small hospital in the centre would be maintained.

Both hospitals got the opportunity to deliver a profile document, stating their view on the continuation of their facilities in a basic, low-care form.[4] In 1987, the municipality selected the Vereeniging to be maintained, which meant the closure of the Boerhaave Kliniek.[5] The premises at the Prinsengracht were expeditiously modified in order to house a First Aid clinic and modern classrooms, and to modernise the surgery department (De Boer & Pley, 1993).

In January 1991, the future of the hospital seemed certain. Optimistically, the name was officially changed to Prinsengracht Ziekenhuis (PGZ) and a new logo and corporate identity were adopted. However, in 1992 the situation was reassessed by former secretary of state Hendriks, who concluded once again that the Boerhaave Kliniek was to be closed[6] and that the Prinsengracht Hospital had to merger with the – much larger – Onze Lieve Vrouwe Gasthuis (OLVG).

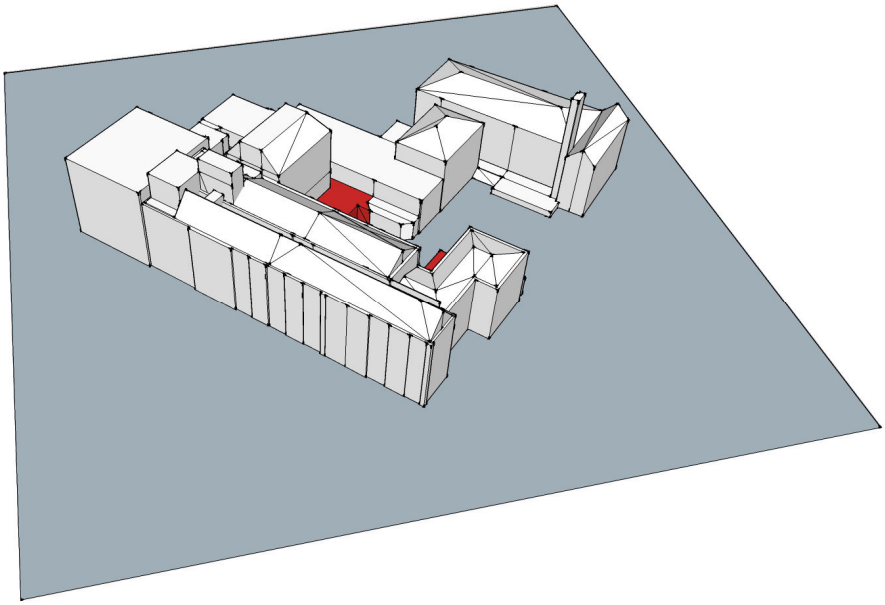


FIGURE 4.12 – SITUATION IN 2014. ILLUSTRATION BY AUTHOR.

In 1994, despite several protests, the merger was official. The Prinsengracht Hospital – now an annexe of the OLVG – was being used as a low-care facility, and did no longer have any beds.

When the 150th anniversary of the original building of Leliman was celebrated in 2007, the OLVG presented big plans for the complex. It was to be renovated, and several wings were to be replaced with new construction, in order to maintain the premises as a modern, up-to-date healthcare facility for the city centre. Bierman Henket Architecten made a design in 2008-2011. For financial reasons, the plan was not carried out and the OLVG sold the complex to project developers COD and Harvest & Millten in 2014. Some of the policlinic functions were moved to a new location at the Spuistraat, others were incorporated in the larger hospitals of the OLVG.

[4] The board of the Boerhaave Kliniek actually suggested that the hospitals would join forces, as to prevent the municipality from setting the hospitals up against each other. The Vereeniging declined.
[5] Due to legal issues, the closing of the Boerhaave Kliniek was revoked in 1988.
[6] The Boerhaave Kliniek was closed in 1994 and continued from 1995 as a small private hospital. It is still open for patients.

Even though no major expansions or transformations have taken place since 1957 – in fact, the capacity of the hospital decreased over time – several interventions were carried out. A short, incomplete summary:

- In 1968, temporary barracks were built on the open space on the Kerkstraat. These barracks served as classrooms for the nurses in training;
- In 1971, the existing dining room was divided into three patient rooms;
- The hospital opened its policlinic facility in 1981;
- Following the decision to maintain the hospital in 1987, the entrance area and restaurant were refurbished by Manten & Lugthart Architecten[7]. The operation wing received an update and a first aid clinic was opened. The amount of beds was reduced from 100 to 79.
- Following the merger with the OLVG, the Prinsengracht Ziekenhuis became a low-care facility, and did no longer have any beds.
- In 2012, Manten & Lugthart Architecten studied the possibility of maintaining a small low-care facility on the existing terrain[8]. These plans were abolished and the terrain was sold.

FIGURE 4.13 - THE CURRENT OLVG CLINIC IN THE SPUISTRAAT. IMAGE: WWW.NLTIMES.NL

4.3 Current Situation

This paragraph offers a description of the Prinsengracht Hospital as it is now, in 2015. There are several plans for the premises, which are elaborated on in §4.4.

The complex is situated on a 3.200 m^2 plot that spans all the way from the Prinsengracht to the Kerkstraat, just west of the Nieuwe Spiegelstraat. The historic parts on the Prinsengracht are national monuments (number 518366 (Smit, 2003)) and have a gross floor space of ca. 3500 m^2 (Building Business, 2014). That makes up around 45% of the 7.800 m^2 of floor space in the entire complex.

The area features a diverse range of functions, including residential and offices, retail, hotels, bars and restaurants, event venues, religious buildings and more. The canals themselves are, however, not very crowded – the public functions are usually located along the perpendicular roads and near open spaces.

[7] See also http://www.mantenenlugthart.nl/projecten/prinsengracht-ziekenhuis-p12.php
[8] See also http://www.mantenenlugthart.nl/olvg-prinsengracht/herstructureringsplan-p37.php

FIGURE 4.14 - THE PRINSENGRACHT HOSPITAL AND ENVIRONMENT (NOT TO SCALE). RED: FOCUS ON RETAIL, CROWDED DURING THE DAY. YELLOW: FOCUS ON NIGHTLIFE, CROWDED IN THE EVENINGS. ILLUSTRATION BY AUTHOR.

The complex consists of many different building parts, conceived and constructed at different times and for different reasons. Furthermore, the complex is significantly larger than the typical canal house. But, because the height of the hospital buildings matches that of the surrounding buildings, and because the rhythm and articulation in the facades are of a similar scale, the complex blends in quite nicely.

FIGURE 4.15 - THE PRINSENGRACHT. PICTURE BY AUTHOR, 13-2-2015.

The model below shows the layout of the complex. The building lines of both the Prinsengracht and the Kerkstraat are continued in the hospital buildings, except for an open space on the northernmost corner, which served as a parking lot for the hospital. Two other courtyards are entirely enclosed by the hospital and the neighbouring buildings.

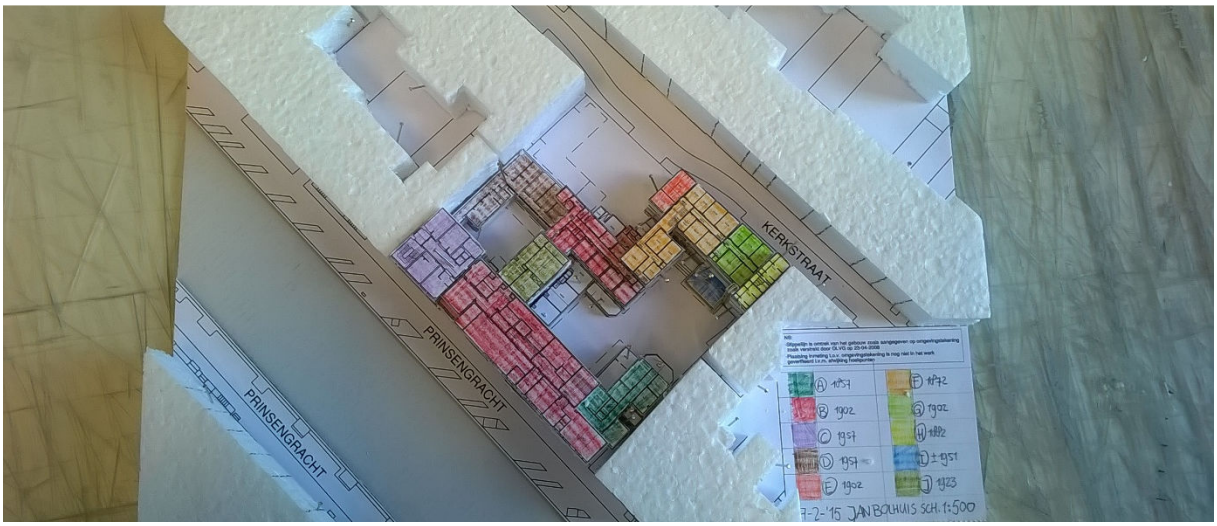


FIGURE 4.16 - 1:500 MODEL OF THE PREMISES AND DIRECT SURROUNDINGS. MODEL AND PICTURE BY AUTHOR.

In the following section, several parts of the building are discussed individually. This is done because the parts of the building are too diverse to be able to give one overall image.

4.3.1 Façade Prinsengracht

The front façade of the Prinsengracht Hospital consists of three parts. On the left, clearly recognisable, there is the modern, white expansion built by De Geus & Ingwersen in 1957. The brick part on the right, featuring the main entrance, dates back to Leliman's original design in 1857. The part in between, as well as the entire roof construction was designed by Posthumus Meyjes Sr. and was completed in 1903.

FIGURE 4.17 - FACADE OF THE PRINSENGRACHT HOSPITAL. PICTURE BY AUTHOR, 25-3-2015.

4.3.2 Façade Kerkstraat

The building at the Kerkstraat consists of four buildings that were not built at the same time. During the renovation in 1902-1903, the youngest parts were constructed and the buildings were merged into one. In the façade, the individual buildings are still clearly recognisable.

FIGURE 4.18 - FACADES ON THE KERKSTRAAT SIDE. PICTURE BY AUTHOR, 13-2-2015.

All four buildings were constructed as homes for the nurses that either worked for the hospital or were in training there. In recent years, the rooms have been used as offices and consulting rooms. The Zusterhuis, like the Prinsengracht part, is a national monument (Smit, 2003).

4.3.3 Leliman's Original Building (1857)

The original design by J.H. Leliman was symmetrical and featured several classical shapes in an eclectic design. The building was, for its time, very modern – for example, there was a ventilation and heating system and gas lighting.[9]

Many interventions have taken place that affected the original building. The north wing has been demolished, and most of the original upper floor and roof have been replaced. Many windows have been replaced, as well as the original front door. Other than that, the facades on the Prinsengracht and on the garden side are, for a large part, original.

Originally, small alleys on either side separated the hospital from neighbouring constructions. One of these alleys still remains, although part of it has been built upon over the years.

[9] An interesting description of Leliman's plans was published in the *Amsterdamsche Courant* on the 14th of August, 1855. See e.g. De Boer & Pley (1993) Grachtenzusters, pp.68-71.

FIGURE 4.19 - TOP LEFT: MAIN ENTRANCE (11-2-2015). TOP RIGHT: ALLEY (25-3-2015). BOTTOM: VIEW FROM ROOM A1.14 (25-3-2015). PHOTOGRAPHS BY AUTHOR.

FIGURE 4.20 - TOP LEFT: ORIGINAL STAIRWELL. TOP RIGHT: CORRIDOR ON THE BEL-ETAGE. BOTTOM: HISTORIC DETAILING AND STUCCO CEILING IN CORRIDOR ZONE. PHOTOGRAPHS BY AUTHOR, 25-3-2015.

The lay-out of the building has not changed much: the corridors, entrance and stairwell are intact. However, many division walls have been moved or modified and many original details are hidden behind recent wall facings, retention walls, lowered ceilings and electrical systems.

FIGURE 4.21 –WALL PANELLING BEHIND PRESSBOARD FACING. PHOTOGRAPH BY AUTHOR, 25-3-2015.

4.3.4 Major Renovation: Posthumus Meyjes Sr. (1903)

Following the decision to modernise the entire hospital, architect Posthumus Meyes Sr. designed a vast refurbishment, renovation and expansion worth *f* 200.000 – a huge investment for that time (De Hingh et al., 2008). Construction was finished in 1903, and the newly constructed parts still make up an important part of the complex as it is today.

The existing hospital was expanded and an additional floor was added, including a new roof construction over the entire length. The premises along the Kerkstraat were merged into one, and an entirely new wing was built that connects the buildings on the Prinsengracht to those on the Kerkstraat. Furthermore, the entire hospital garden was redesigned.

Posthumus Meyjes Sr. designed the complex to meet modern standards for healthcare, but connected with the existing buildings in terms of architecture and style. He applied the same corridor system and preserved Leliman's structure where possible. However, the expansion did not have a bel-étage. Rather, the ground floor was on street level, making it more accessible and increasing its height.

The expansion featured an elevator and an entirely new stairwell that ran up to the third floor – which, in fact, was entirely new as well.

FIGURE 4.22 - TOP LEFT: STAIRWELL (CONCRETE). TOP RIGHT: ELEVATOR WITH ORIGINAL DOORS (?). BOTTOM: PRINSENGRACHT FACADE. THE 2ND AND 3RD FLOOR AND THE ROOF CONSTRUCTION DATE BACK TO THIS RENOVATION. PHOTOGRAPHS BY AUTHOR, 25-3-2015.

FIGURE 4.23 - TOP LEFT: MANY ORIGINAL, DECORATED DOORS ARE PRESENT, SOMETIMES COVERED WITH PRESS WOOD PANELS. TOP RIGHT: CORRIDOR IN THE NORTH WING, GROUND FLOOR. BOTTOM: THE FORMER SALON WITH CONSERVATORY. PHOTOGRAPHS BY AUTHOR, 25-3-2015.

The rear wing, connecting the hospital to the nurses' houses, contained a new kitchen, salon and conservatory with direct access to the garden. The patient rooms on the first floor even had balconies.

In comparison with Leliman's design, the new expansion was relatively modest in its decorations and materialisation, because of more strict hygiene regulations, and probably also due to financial considerations. Still, stucco ceilings and wooden panelling, doors and framework were decorated, and many of these decorations have been preserved. Many are covered by lowered ceilings and retention walls.

4.3.5 New surgery wing: Posthumus Meyjes Jr. (1923-1925)

Because healthcare standards changed rapidly, the existing operating facilities quickly became outdated. In order to stay among the most modern hospitals, an entire new floor was constructed, featuring two high-tech operating theatres.

FIGURE 4.24 - NEW RECOVERY ROOM OFFERS VIEW TO THE CANAL. PHOTOGRAPH BY AUTHOR, 25-3-2015.

For the new surgery wing, the western stairwell was closed on the top floor. The original stairwell by Leliman was extended to the third floor. The existing nurses' rooms were transformed into a boardroom and the famous recovery room, both offering their users a view over the canal.

The stained glass roof light that used to light the western stairwell from above, was maintained. Three smaller roof lights were added in the corridor in the same fashion, making for a very special feature in the new surgery department.

In renovation works – in 1938 and 1987 – some distinctive features have been removed, including the large windows in both operating theatres. Also, the lay-out of the surgery wing was modified and modern heating and ventilation systems were added, as well as contemporary electrical systems.

FIGURE 4.25 - TOP LEFT: CORRIDOR IN SURGERY WING, WITH STAINED GLASS ROOF LIGHTS. TOP RIGHT: PREPARATION AREA. PHOTOGRAPHS BY AUTHOR, 25-3-2015. BOTTOM: ONE OF THE OPERATING THEATRES. PHOTOGRAPH BY STEVEN BEKKERS, 13-2-2015.

4.3.6 Modern Expansion by De Geus & Ingwersen (1957)

The modernist expansion that De Geus & Ingwersen designed in the 1950's, is the only part of the hospital that clearly stands out in terms of architecture and style. It is also the only part of the hospital that meets several contemporary standards, such as a corridor wide enough for two people in wheelchairs – or beds, for that matter – to pass each other.

FIGURE 4.26 - TOP LEFT: PRINSENGRACHT FACADE. TOP RIGHT: CORRIDOR, 2ND FLOOR. BOTTOM: TYPICAL PATIENT ROOM, FIRST FLOOR. PHOTOGRAPHS BY AUTHOR, 25-3-2015.

The concrete and glass building on the canal side mostly contains patient rooms, on both sides of the corridor, as well as some treatment and consulting rooms. Due to the large steel windows – which, by the way, are placed in timber frames – the rooms are very bright. The ground floor houses several other rooms, and this part of the façade is less transparent. In contrast to the white finish and glass of the upper floors, the lower part of the façade is cladded with dark grey tiles of washed gravel concrete. The former emergency and ambulance entrance – currently entrance for disabled people – is on the far end of the building.

To the back, a single-storey wing was constructed at the same time, creating a second courtyard that is currently being used as a bicycle parking lot. This wing contained storage and a new hospital kitchen, but has been transformed into an ophthalmology department in the 2000's.

The final part of the design by De Geus & Ingwersen is a pair of treatment rooms facing the hospital garden, adjacent to the conservatory from 1903.

4.3.7 The Zusterhuis: Housing for Nurses

Although the building was not constructed in one go, the Zusterhuis at the Kerkstraat can be considered a whole. An interior corridor connects all four buildings and provides access to rooms on either side – originally the nurses' rooms, more recently consulting rooms and offices.

FIGURE 4.27 - THE BUILDINGS ARE CONNECTED BY A SINGLE, NARROW CORRIDOR. PHOTOGRAPH BY STEVEN BEKKERS, 13-2-2015.

FIGURE 4.28 - TOP LEFT: FACADE ON THE KERKSTRAAT. TOP RIGHT: THE ENTRANCE BEARS SIMILARITIES TO THE MAIN ENTRANCE AT THE PRINSENGRACHT. PHOTOGRAPHS BY AUTHOR, 11-2-2015. BOTTOM: TYPICAL OFFICE INTERIOR. PHOTOGRAPH BY STEVEN BEKKERS, 13-2-2015.

FIGURE 4.29 - THE BASEMENT (1951) HOUSES THE HEATING SYSTEMS FOR THE ENTIRE COMPLEX. PHOTOGRAPH BY STEVEN BEKKERS, 13-2-2015.

In 1951, the basement was expanded to the back and an entirely new heating system was installed. The first system required a large fuel tank, which is still present. Currently though, modern gas-fired boilers are in place.

4.3.8 Gardens and courtyards

The original design by Leliman featured a large garden, in accordance with the 19th century views on healthcare. The shape of the garden has been affected by expansions and refurbishments of the hospital, and the entire lay-out has been redesigned at least twice. Still, the garden has always played an essential role in the functioning of the hospital. In its current shape, the garden has a floor space of ca. 535 m^2, including a 75 m^2 raised terrace.

FIGURE 4.30 - VIEWS IN THE GARDEN. PHOTOGRAPHS BY STEVEN BEKKERS, 13-2-2015.

The garden does not show a consistent design, but features a number of nice elements, including a large red beech tree with a bench, two conservatories, and a sunny terrace. Most of the facades facing the garden are plastered and painted white, in contrast to the red brickwork on both streets. The garden is quiet and calm, and offers an escape from the crowded city life of Amsterdam. All adjacent building parts have a visual and often functional relation to the garden, making it a key element in the hospital organisation.

FIGURE 4.31 - TOP: GARDEN AS SEEN FROM THE TERRACE. BOTTOM: VIEW FROM THE UPPER FLOORS. PHOTOGRAPHS BY JACQUELIEN CANNOO, 13-2-2015.

Behind the expansion by De Geus & Ingwersen from 1957, there is a second courtyard. This is currently paved with concrete tiles and contains sheds for bicycle parking. Despite its size – the courtyard is ca. 160 m^2 - the courtyards lacks the appealing atmosphere that characterises the garden.

FIGURE 4.32 - VIEW IN THE COURTYARD. PHOTOGRAPH BY AUTHOR, 25-3-2015.

The third open space on the plot is the hospital parking lot. In contrast with the others, this space is not surrounded by buildings and can be accessed from the Kerkstraat. The 500 m^2 parking lot can take up to 13 cars, and is also used for delivery of supplies and for garbage collection. The presence of waste containers, the relatively closed facades and the lack of maintenance give the space a rather run-down appearance.

FIGURE 4.33 - THE PARKING SPACE. PHOTOGRAPHS BY JACQUELIEN CANNOO, 25-3-2015.

4.4 Recent Initiatives

The premises are currently owned by project developers Cradle of Development (COD) and Harvest & Millten. Together with MVSA Architects and Architectenbureau J. van Stigt, they are preparing a renovation and are planning to create a mix of housing and working spaces (Schenk, 2014). The developers could not say anything about the feasibity of, for example, healthcare functions, but are trying to enter into dialogue with local residents. Some websites suggest that the developers are planning to create a luxury resort for wealthy elderly (Mokums, 2014), but these rumours have not been confirmed by the developers.

Over the last years, several other suggestions have been done. For example, Dutch political party CDA (Christian-Democratic Party) suggested in 2013 that the building should be used for housing for elderly, possibly including some common (healthcare) functions (Shahsavari-Jansen & Drooge, 2013). This suggestion was done when the OLVG was first considering to abolish the premises.

It is, however, apparent that the proposal was not thought through too much. For example, the authors state that the Prinsengracht is easily reachable by car and ambulance, which is to be doubted, and that the hospital is free of doorsteps and sills, which is evidently not true.

Former surgeon René Marti proposed earlier to turn the hospital into an orthopaedic clinic with a rehabilitation facility (Marti, 2008):

> *'Toen ze het ziekenhuis wilden sluiten, heb ik nog een heel rapport geschreven: denk eraan, dit is het stomste wat je kunt doen, maak er een orthopedische kliniek van met revalidatie. Dat kleinschalige is een voordeel. Zo'n gigantisch* Betrieb *als het AMC komt niet uit de kosten. Daarom heb ik gevochten voor het behoud van de Prinsengracht. Met Hans van Mierlo zat ik* een beetje politiek te maken *voor het behoud."*

Marti praised the building for its favourable scale and location in the city centre, and has copied the organisational concept in his private clinic in Switzerland (De Hingh et al., 2008).

In 2012, Manten & Lugthart Architecten made a study of the possibility to maintain a smaller policlinic facility on the premises, in a new building on the current parking lot (Manten en Lugthart Architecten bna, 2012). Eventually though, these plans were not carried out and the OLVG bought a different building in the city centre.

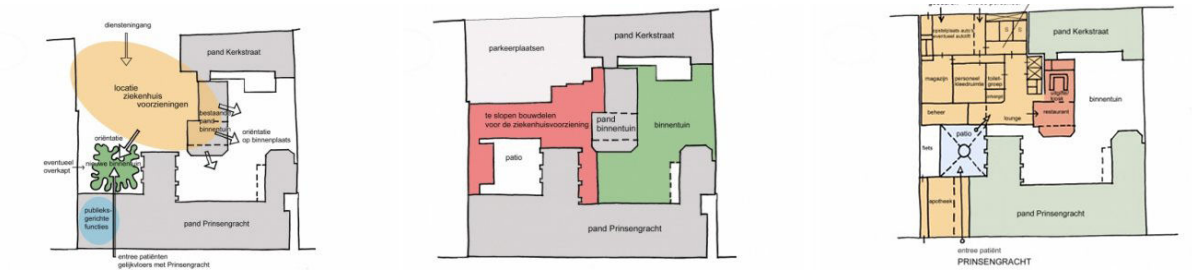


FIGURE 4.34 - CONCEPT DRAWINGS BY MANTEN & LUGTHART ARCHITECTEN BNA, 2012

5 User Experience at the Prinsengracht

As mentioned in chapter 3, user experience in hospitals is influenced by three factors: the quality of the healthcare offered, the interaction between patients and staff, and the (built) environment (Bovenberg et al., 2010). In this chapter, the subject of user experience will be elaborated on.

The function of the Prinsengracht Hospital building changed entirely, following developments in medicine in the 19th and 20th centuries. This has affected the experience of all three user groups. Overall, the building scores reasonably well on care-related aspects such as windows, views and facilities. However, the building has been used for cure-related purposes for the last twenty years, and fails to meet many of the technical demands for a modern healthcare institute.

5.1 Methods and Definitions

In order to assess the way that the Prinsengracht Hospital is conceived, it is important to be clear about the terms that are used and the way in which the research is conducted.

5.1.1 The User

The term Healing Environment is very patient-oriented. However, the environment is used and experienced by many people, and all of them have different or even conflicting needs and demands (Fornara et al., 2006). Generally, three types of user can be distinguished: the patients (or clients), the staff, and the visitors.

FIGURE 5.1 - THE THREE TYPES OF USER: PATIENTS, STAFF AND VISITORS.

The patient typically plays a passive and dependant role (Fornara et al., 2006), as he has to follow the rules and regulations that apply in the hospital environment (Wagenaar, 2005). As a consequence, the hospital environment can be experienced as unfriendly or even hostile. Moreover, the patient is not familiar with the context and can feel disorientated, which only contributes to the feeling of alienation. However, patients typically experience the hospital for a relatively short time.

Hospital staff experience their environment quite differently: their role is more active, and staff typically have several responsibilities in the hospital (Fornara et al., 2006). The environment is familiar to them, and they typically experience the same environment for a long time on a daily basis. For staff then, the rules and regulations offer stability and make it easier to do their work.

Visitors have, for a long time, been regarded as a less important group of users (Fornara et al., 2006). But also for the visitor, the unfamiliar hospital environment can be disorientating and unfriendly. Despite the short time spent in the hospital, a visit can be experienced as stressing.

5.1.2 Measuring Experiences: OAZIS

Experiences are strictly personal and therefore difficult to measure. For that reason – as we have seen in § 3.3 – researchers often focus on measurable aspects of the environment. For example, sunlight, windows, smells and furniture arrangements can be assessed and have been proven to affect experiences (Dijkstra, 2009). Sound, colour, nature and spatial lay-out are also likely to have an effect (Bovenberg et al., 2010).

A very useful tool for assessing the quality of an environment is OAZIS, developed by TNO in 2009. OAZIS stands for 'Onderzoek Aantrekkelijkheid Zorgomgevingen met behulp van de Impact Scan' (Schaaf & Nauta, 2009), which roughly translates to 'Research Attractiveness (Health) Care Environments by means of the Impact Scan'. The tool can aid designers or healthcare providers in understanding the variables that can influence people's experiences.

OAZIS research is performed by means of a questionnaire, which is available online (Schreuder, 2009). There are two versions: OAZIS Cure for hospitals, and OAZIS Care for all kinds of care-related institutions. The questionnaire can be filled out by patients, staff and visitors alike, and results in a score (range 1-5) for each of its eight topics. The topics, or themes, are:

The eight themes of the OAZIS questionnaires by TNO	
Privacy and Autonomy	The extent to which the privacy of clients is guaranteed, and, closely related, the (presence of an) area where the client is 'in charge'.
Windows and View	The amount of daylight and the views for the clients.
Comfort and Control	The quality of, among others, the air (temperature, ventilation), light- and noise levels and smells. Furthermore, the extent to which the client can influence these factors (e.g. open windows).
Facilities	Facilities outside the client's room, providing activities and the possibility to meet other people and to 'continue their usual lives'.
Orientation and Routing	The 'journey' that clients and visitors have to make from their homes to the rooms. The extent to which buildings are readable, clear, accessible and not disorienting or alienating.
Interior	The atmosphere inside the building and the extent to which long-term users can participate in the choice of interiors.
Nature	The amount of direct and indirect contact with living green, both inside and outside.
Staff	The extent to which the building supports staff in their proceedings and the influence that staff members have on the building.

TABLE 5.1 - SUMMARY OF THE 8 THEMES OF OAZIS

5.1.3 Interviews

The Prinsengracht Hospital issued several anniversary booklets, containing interviews with former patients and members of staff. Many newspaper articles are available as well. Obviously, these interviews are biased in favour of the hospital. They do however give an indication of the aspects that people liked about their stay in the hospital, and provide clues about the topics to research further.

5.1.4 Characteristic Building Aspects

Several characteristic building elements, such as the stairwells, roof lights and garden, have been mentioned by many patients and members of staff and are in most cases considered to be of high value. Also, there are some intangible aspects that contribute to the overall experience. A selection of these aspects will be discussed in detail.

5.2 OAZIS: Results

Both the OAZIS Cure and Care questionnaires focus on the experience of patients and staff that are staying in the hospital, and give no indication whatsoever about the quality of the healthcare offered. For this research, only the OAZIS Care questionnaire has been taken into account. The OAZIS Cure version is less relevant, because the hospital is, in its current shape, not very suitable for any cure-related function. The questionnaire is filled out for the situation in 2014, just before the hospital was closed. Although the hospital no longer featured any beds, several patient rooms are still unmodified, allowing the assessment to be performed.

It should be noted that the results of the questionnaire would be more reliable if several patients and members of staff would have participated, but this was not possible within this research.

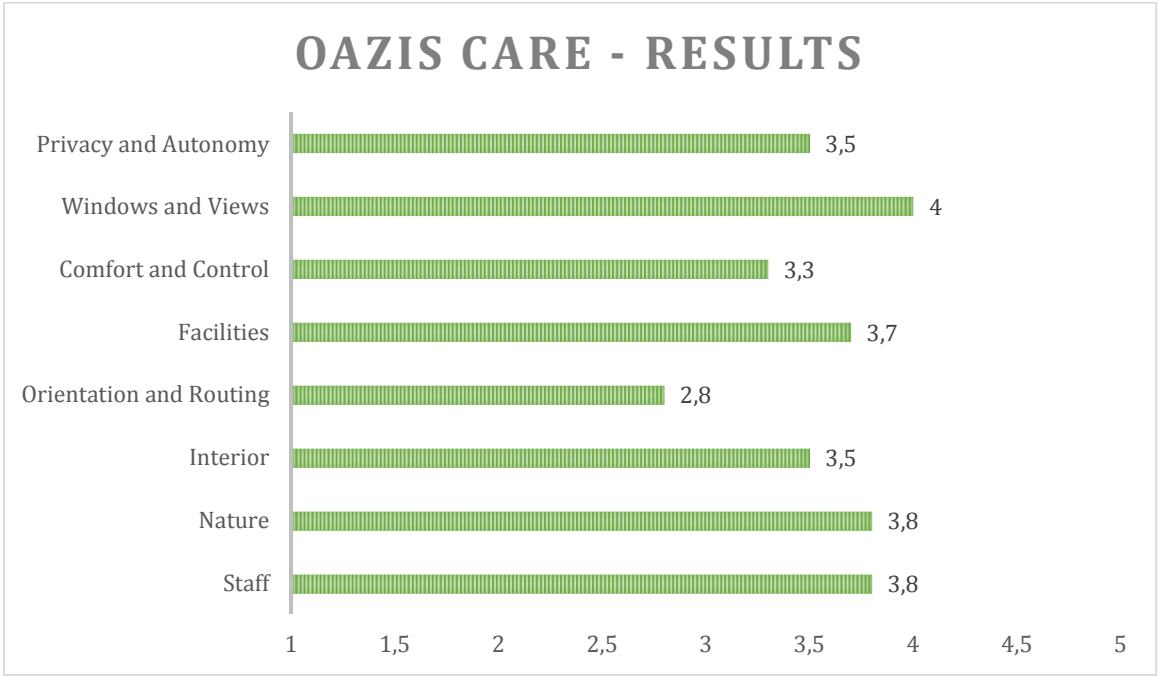


FIGURE 5.2 - AVERAGE SCORES OF THE PGZ FOR THE EIGHT THEMES IN OAZIS CARE. THE SCALE STARTS AT 1, BECAUSE A LOWER SCORE IS NOT POSSIBLE FOR ANY TOPIC.

FIGURE 5.3 - PRIVACY. TOILETS FOR PATIENTS AND STAFF ARE LOCATED ON THE CORRIDOR, WITHOUT ANY ROOM IN BETWEEN. VISUAL AND AURAL PRIVACY IS MINIMAL.

For **Privacy and Autonomy**, strong points are the possibility of clients to have a room of their own, and the possibility to put up personal belongings in their rooms – some patients actually took their own furniture. Weak points are the lack of private sanitary rooms and the lay-out of the patient wings, which make it difficult to regulate the patient's privacy.

The second theme, **Windows and Views**, is where the hospital scores its highest grade. All patient rooms feature abundant windows and daylight and usually an attractive view to the gorgeous garden or the Prinsengracht. In many rooms, the windowsills are lowered and allow bedridden patients to see out of the window.

The grade for **Comfort and Control** is among the hospital's lower grades. In most rooms, the clients can open windows

or change the light themselves, and the type of lighting is often adapted to the room. For example, the recovery room is equipped with a very soft, even lighting. However, clients have only limited influence on the temperature in their rooms. The corridors can be quite noisy and feature generic, institutional lighting.

The hospital **Facilities** include space for clients to have visitors. They can also take their visitors for a drink or a snack in the restaurant, and there are nice rooms – and a garden – for group activities. A weak point is that visitors cannot stay the night in the building. Also, there is only limited space for clients to meet each other in small groups.

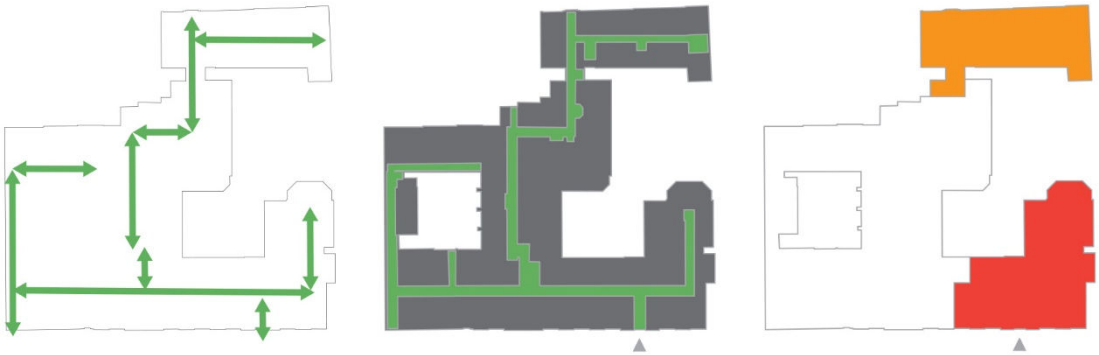


FIGURE 5.4 - ORIENTATION & ROUTING. LEFT: LACK OF HIERARCHY BETWEEN CORRIDORS. MIDDLE: LIMITED DAYLIGHT IN CORRIDORS. RIGHT: LARGE PARTS INACCESSIBLE (RED) OR DIFFICULT TO REACH (ORANGE) FOR DISABLED PEOPLE.

Orientation and Routing are the weakest points of the complex. This is caused by the lack of hierarchy between main and secondary routes, and the fact that most corridors don't have any connection with outside, reducing people's sense of direction. It is also difficult to find the exits if you don't know your way in the building. Moreover, large parts of the hospital are not accessible for disabled people, including the main entrance. A positive point is the use of different colours in different wings of the complex. Also, effort has been put in signage and plans at various places in the building, so people will eventually find their way, but it's not the most pleasant visit.

The grade for **Interior** is determined by the overall atmosphere and furniture, which have been thought through well. The spaces are also clean and tidy, and feature plants and pieces of art. However, generic lowered ceilings are applied at various places and make many rooms look alike, Also, the furniture does not always match the function of a room. Rethinking this would also make the building more comprehensible as a whole.

The main feature determining the grade for **Nature**, is the hospital garden. It offers a pleasant and protected place for clients and staff, allowing them to go outside relatively easily. However, the location in the Canal Belt doesn't offer a lot of possibilities to have green spaces along the streets or to have animals. Also, as mentioned before, there is not a lot of daylight in the corridors.

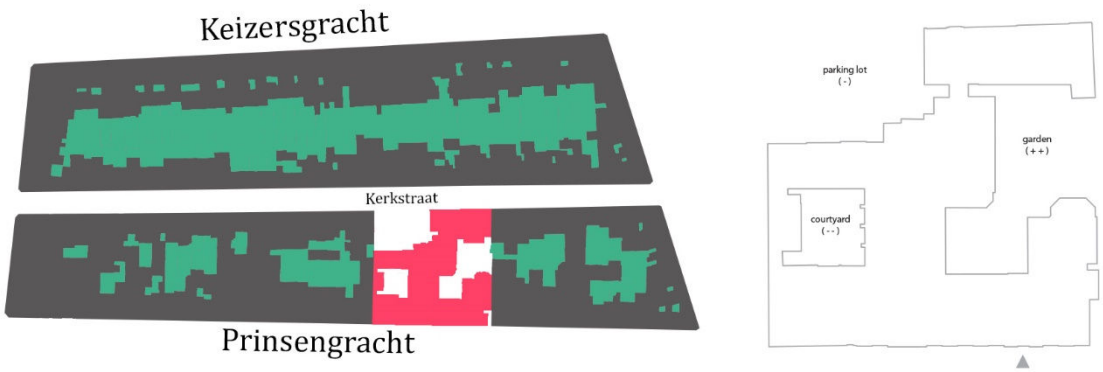


FIGURE 5.5 - NATURE. THE CANAL BELT IS KNOWN FOR ITS LARGE AMOUNT OF GARDENS. AT THE PRINSENGRACHT HOWEVER, THERE IS LESS OPEN SPACE.

For the final theme, **Staff**, the large amount of space to work or to retreat to is an important asset. Like the patients, the employees can open and close windows and regulate the light and heating. A negative point is the fact that many offices and coffee rooms are located far away from the place where members of staff actually work.

In short then, the Prinsengracht hospital scores high grades for its connection to nature – visually and functionally – and for the facilities for staff. Most patient rooms have large windows with relatively low sills, allowing bedridden patients to see out of the window. In most cases, the view is quite attractive: patients can see the garden or the Prinsengracht. However, some rooms are located next to a small courtyard that is only used for bicycle parking. These rooms are very light and comfortable, but the view is close to depressing.

For the theme of Orientation and Routing, the hospital scores its lowest mark. This is because of the lack of hierarchy in corridors and the absence of daylight in many of them. Moreover, the accessibility for disabled people is very poor – they can't even use the main entrance.

It should be noted though, that it is unknown how the scores of the Prinsengracht Hospital compare to those of other hospitals and clinics in the area, because the results of OAZIS assessments have not been published. Moreover, it is important to understand that these scores apply to the PGZ as an institution for care. Measured by Cure-criteria, the scores could be quite different.

5.3 Interviews with Staff

Many former employees have been interviewed over time, for anniversaries of the hospital and after the closure had been announced. These interviews – some written, some from radio and TV shows – offer an insight in how the hospital used to function. This paragraph is based on interviews given by orthopaedic surgeon René Marti (Marti, 2008), head nurse Else van Oorschot (De Hingh et al., 2008) and nursing director Christine Meyer (Blok, 2014).

The most special feature – according to the interviewees – was the entire way of working itself. The team of staff was very close and professional. The relatively small scale of the hospital allowed for everyone, including the students, to know each other personally.

The Prinsengracht Hospital is the oldest hospital with their own education programme in Amsterdam. From the earliest years, nurses were trained to perform all of their tasks in a specific way. All education was done internally and, according to the nurses, not very professionally. The

education programme hasn't changed much – the students from 1970 were taught the same as those from a century earlier! Compared to other hospitals, the nurses of the Prinsengracht were trained very well in taking care of people, but not at the medical aspects.

To be allowed to study at the Prinsengracht Hospital, students had to come from a specific social class. Many applicants were rejected, and many others were accepted because of connections of their families with the hospital or doctors. For a long time, male students were not accepted, nor were catholic students.[10]

The relation between patient and staff was essential. At the Prinsengracht, the patient was, to a large extent, in charge. They could bring their own belongings and even furniture or pets. If a patient wanted to go outside, they could always go into the garden, even if they could not get out of their beds. Special attention was paid to holidays: especially the Christmas traditions and decorations were elaborate.

The building supported the mentality and the way of working very well, even though it was difficult to keep up with modern trends in healthcare. Whenever the building was expanded or refurbished, the character of the existing building was maintained and the entire structure and organisation could be maintained.

5.4 Architectural Aspects

5.4.1 Tangible Elements

A typical feature that makes the hospital so recognisable, is the front façade and especially the bright red and white awnings. These are visible from afar and contribute to the image of the hospital.

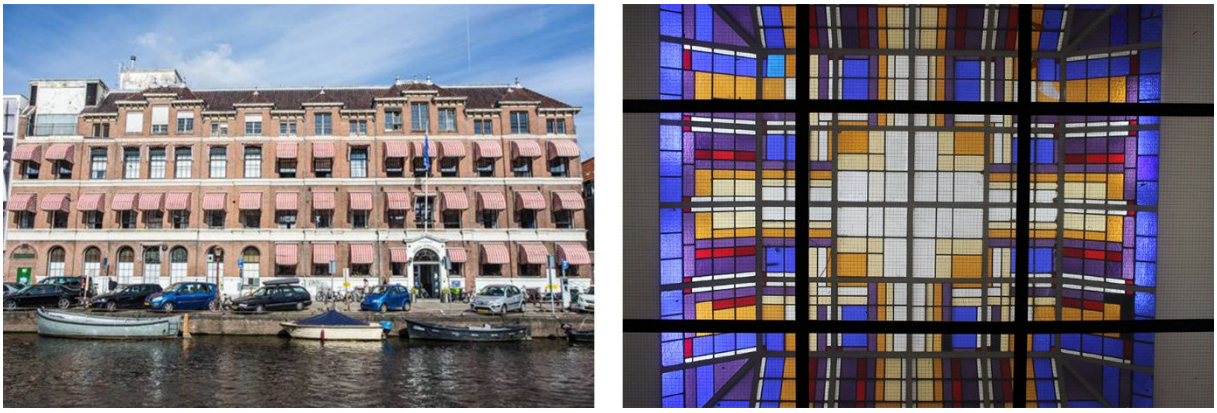


FIGURE 5.6 - THE CHARACTERISTIC RED AND WHITE AWNINGS (LEFT, © CIGDEM YUKSEL, DE VOLKSKRANT) AND STAINED GLASS ROOF LIGHTS (RIGHT, PHOTOGRAPH BY AUTHOR, 25-3-2015).

The stairwell from 1903 and the corridor in the surgery department from 1923 feature four stained glass roof lights. These have been appreciated by patients and staff alike (Korzac, 2014). They were only seen by staff and by patients that actually underwent surgery, and are therefore part of the slowly unravelling mystery that the building puts forward to its users (Evans & McCoy, 1998).

Especially the older parts of the building are full of small, historic details: the panelling on the walls, the decorated stucco ceilings, the iron grilles of the 19th century ventilation system and the window ornaments are just a few examples. Many photographers have noticed these elements and made

[10] In this light, the merger with the – catholic – OLVG is all the more surprising.

entire series of pictures (Mokums, 2014), and the characteristics are also often mentioned in interviews (De Hingh et al., 2008).

5.4.2 Intangible Aspects

Although there is little scientific proof, it is widely assumed that many more aspects affect the experience of a space. Several architectural dimensions can be linked to the concept of stress (Evans & McCoy, 1998). Stress levels can be affected by, among others, the amount of stimulation, coherence or control that an environment offers.

The Prinsengracht Hospital is rather complex. Its corridors offer an overview of the premises only to a limited extent, and some spaces are occluded or can only be seen from specific points. The user is thus stimulated to explore the premises and the complex becomes more interesting.

The corridors do, however, not form a coherent whole. Their unpredictability makes the complex less legible and can be a cause for people to get lost. It can be difficult to comprehend one's location in the building or to formulate a 'mental map' of the overall configuration of the complex (Evans & McCoy, 1998), even though the corridors in different wings have their own distinctive colours to help the user.

Other stimulating design elements include the noise, light, colour and odour of a space. As the Prinsengracht has had to observe the same rules and regulations as other hospitals, in most rooms the use of materials and colours is very similar. This makes the rooms sound and smell the same and triggers a typical 'hospital atmosphere'.

The wings of the complex don't really have focal points, although the hospital as a whole does have one: the garden. Stronger focal points could make the user feel in control, and also contribute to the comprehensiveness of the whole. The wings are all interconnected: one can reach any point in the hospital without having to leave the building.

5.5 Summary

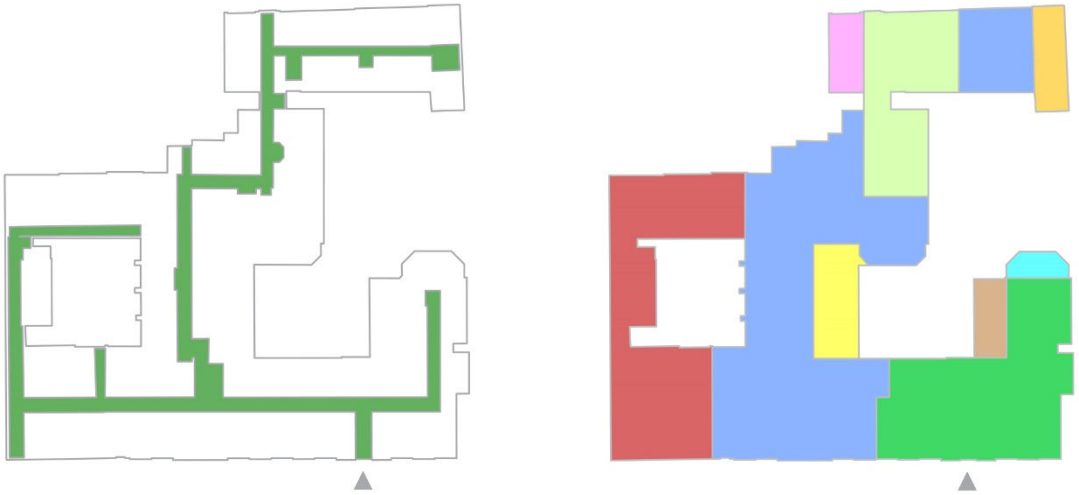
The Prinsengracht Hospital does not currently meet most medical standards and is in need of an upgrade. The building does however possess a number of architectural qualities that are likely to contribute to the sense of well-being of its patients and staff. Elements that play a role in the perception of the complex include the garden and the historic details, but also the urge to explore that the building triggers and the possibilities to take a step away from everyday life for reflection or simply peace and quietness.

The professional attitude and personal approach by staff was admired by patients. This attitude was possible in the Prinsengracht Hospital because of its relatively small scale. The organisation and the people may have been quite eccentric and had their own little ways and traditions, but the building itself was just as eccentric and matched the way of working very well.

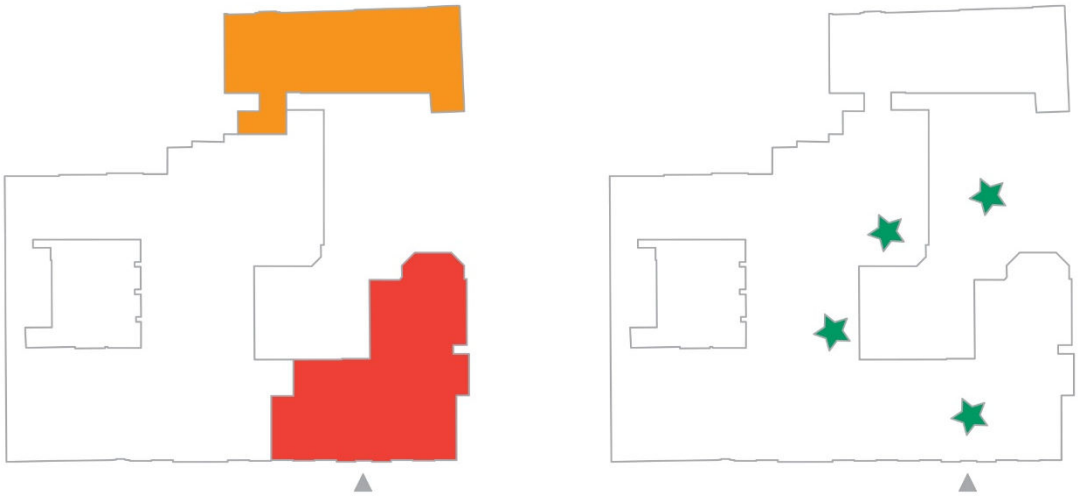
In short then, the architectural dimension has not been the determining factor in the perception of the hospital by its patients. The architecture did however support care-related activities very well, and can likely be used for a similar purpose in the future.

6 Value of the Prinsengracht

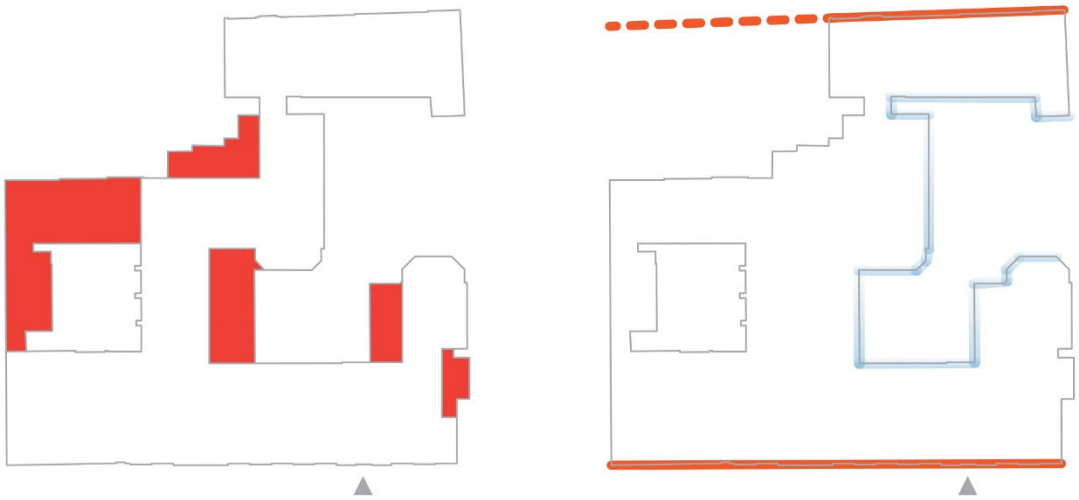
In this chapter, some characteristic properties of the Prinsengracht Hospital are summarised in schemes. These schemes are also part of my design research and analysis report, which are more elaborate. This chapter is not intended to give a complete overview, but simply to touch upon some of the key aspects of my research and design proposals.



The Prinsengracht Hospital consists of many different buildings, which all possess a specific style and quality. As a whole though, the complex is hard to understand. This is also apparent in the dark, maze-like corridors: to get from one place to another, the user has to make many turns and may have trouble orientating because of the lack of focal points.



Some characteristics of the hospital are very strong, like the garden with its conservatories and balconies, and the very bright and spacious stairwell near the main entrance. These elements can definitely be of value in a redesign. However, in a functional sense, the building is not up to date. For example, large parts of the complex are not accessible for disabled people.



Typical for the building blocks of the Canal Belt is the enclosed garden area in the middle, which is not visible from the street. Although the blocks on either side of the Prinsengracht are more cluttered, the Prinsengracht Hospital was clearly designed with the garden in mind. There is a clear difference between the hard, brick urban facades on both streets, and the softer, white plaster finish and larger windows facing the garden. This is an asset that both creates a pleasant atmosphere in the courtyards and enhances the legibility of the complex. The legibility can be improved even further by removing some of the annexes that were built over the last decades and have cluttered the clear, classical structure of the hospital.

7 Forensic Psychiatric Care

The Prinsengracht Hospital has provided a high level of healthcare for over a century and a half. Even though it is small and outdated as a hospital, it can maintain its role as a place for protection, reflection and possibly healing. My proposal is to establish a centre for (forensic) psychiatric care.

7.1 Forensic Psychiatric Care in the Netherlands

Psychiatric healthcare emerged in the Netherlands from the beginning of the nineteenth century. Until that time, psychiatric patients were simply locked away rather than treated (Mens & Wagenaar, 2010). Like with regular healthcare, the pavilion system was preferred for psychiatric hospitals in the second half of the nineteenth century. In many cases, psychiatric hospitals were located outside of the cities in a quiet and green environment. They were charitable organisations, usually supported by catholic or protestant churches.

Despite obvious parallels with regular healthcare, there are some very important differences. First of all, the role of technology in psychiatric care was relatively minor. As a consequence, there was less need for modernisation and alteration of its buildings.

The second difference is that the patient was not considered as an isolated, sick person, but rather as a social being suffering from a disrupted relation with society and in need of re-education. The importance of external impulses and experiences was recognised by therapists and architects. Therefore, psychiatric hospitals of the late nineteenth and early twentieth centuries showed community-like characteristics, as opposed to the individual approach that became apparent in regular hospitals.

In the years after the Second World War, there was hardly any new construction. Reconstruction of existing complexes was more important than the development of new clinics. Only in the 1960's, newly constructed clinics were opened. It is important to understand that by this time, psychoactive drugs had been introduced and common views on psychiatric treatment had changed radically. There was an ambition to create a community within the clinics, which would resemble the 'normal' society as much as possible. An example of such a socio-therapeutic community are the residences in Wolfheze, designed by E.J. Rothuizen and C. Dekker in 1961.

As a result of psychoactive medication, different types of therapy gained importance. Most kinds of therapy required smaller groups of patients than had been common, which led to yet another architectural view on psychiatric institutions. Some very large buildings were designed – divided into many pieces – but this development met a resistance quite similar to that of regular hospitals.

In the 1970's, different kinds of 'living' were conceived, to provide an alternative for both psychiatric hospitals and common society. This trend continued in the 1980's. 'Protected living' gained a larger and larger role in mental healthcare as a sort of in-between facility. At the same time, psychiatric care moved back towards the cities, causing some of the beautiful rural estates to become vacant.

Psychiatric care became a more regional issue in the 1990's, and the focus shifted to ambulatory and short-term care. A new 'Multi-Functional Unit' (MFE) was introduced. MFE's aim to provide and integrate ambulatory, clinical and poli-clinical care. The patient rooms resemble regular housing, but the MFE is typically located in the vicinity of a regular hospital. It does not possess specific architectural or urban characteristics, but usually blends in with its surroundings. However, MFE's

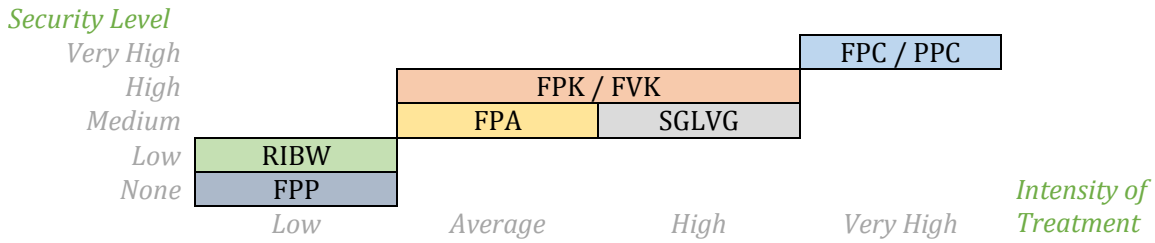
clearly show the rediscovery of architecture as being of added value to the functioning of the institute (Mens & Wagenaar, 2010).

A special kind of institute was conceived to provide forensic psychiatric care. Forensic patients are a difficult group to manage as they are convicted for a criminal offense, but also have psychiatric issues. Regular prisons are not suited to provide the healthcare necessary to treat these patients in order to prevent recidivism. Psychiatric hospitals are, however, not suitable either, as forensic patients can be dangerous to other patients and staff and are likely to try and escape. Consequently, a large number of dedicated forensic clinics has been built since the 1980's.

The most recent trends, both in forensic and regular psychiatric healthcare, involve the integration of care in society to such an extent that the clinics and policlinics are hardly recognisable as such. The small-scale urban clinics have become independent and no longer need to be close to a regular hospital. Life in the clinic has become very similar to regular life, and supports re-integration of psychiatric patients into society.

Forensic psychiatric care has become a common way of preparing convicts for their return to society. In the Netherlands, around 1.700 patients are admitted to forensic clinics each year. Additionally, 8.500 patients are admitted for ambulatory forensic care. The total amount of convicts in the TBS programme is relatively constant at 1.900 patients (Verwaaijen, 2012).

There are different kinds of forensic care. All of them focus on the risk that a patient poses to themselves or others, but there are large differences in the intensity of the treatment and the level of security.



FPC	Forensisch Psychiatrisch Centrum	High-security centre for convicted psychiatric patients
PPC	Penitentiair Psychiatrisch Centrum	As FPC, but located inside a regular prison
FVK	Forensische Verslavingskliniek	Clinic for convicts with (drug) addictions
FPK	Forensisch Psychiatrische Kliniek	Clinic for convicted psychiatric patients
FPA	Forensisch Psychiatrische Afdeling	As FPK, but more open and less security
SGLVG	Instelling voor Sterk Gedragsgestoorde en Licht Verstandelijk Gehandicapte justitiabelen	Institute for convicted patients with greatly disturbed behaviour and/or slight intellectual disability (IQ < 85)
FPP	Forensisch Psychiatrische Polikliniek	As FPA, but patients can live at home
RIBW	Regionale Instelling voor Begeleid Wonen	Protected and guided living, either in a community-like group or independent

TABLE 7.1 - TYPES OF FORENSIC CARE IN THE NETHERLANDS

In the city of Amsterdam, several types of forensic care are offered. In the city centre however, there is ambulatory care, but no clinical facilities.

7.2 Healthcare Architecture: de Jong Gortemaker Algra

In the Netherlands, there are some architecture offices that have specialised in healthcare related architecture. Among them is the office of de Jong Gortemaker Algra (dJGA) in Rotterdam. One of their senior architects, Jeroen Veth, has been involved in the design of several institutes for forensic care and has agreed to share some of his insights (Veth, 2015).

FIGURE 7.1 - IMPRESSION OF THE FPC GENT. IMAGE: WWW.DJGA.NL, ACCESSED 28-5-2015.

The largest and most secured project the office designed, is the forensic psychiatric centre in Gent, Belgium. The 29.600 m^2 clinic has a capacity of 272 patients and can accommodate them through various stages of their treatments.

Forensic care is relatively new in Belgium – the FPC Gent was the first centre for forensic care to open in 2014. The Belgian government did not have much experience with the phenomenon, and their programme of demands was roughly that of a prison. The office of dJGA managed to shift the focus somewhat towards the psychiatric demands, but the end result is still basically a compromise between the parties.

The high level of security is visible everywhere. The premises are surrounded by a fence, a wall, and another fence, and cameras are all around. The steel window- and doorframes are equipped with extra strong hinges and handles and reinforced glass is installed in every room. The patient environment resembles a prison rather than a home, despite the large gardens and colourful façade elements.

The floor plan clearly shows the complexity of the assignment. There is a clear inner structure, but because there are different patient groups that are not supposed to mix, orientation can still be difficult and many parts of the building are not accessible for everyone.

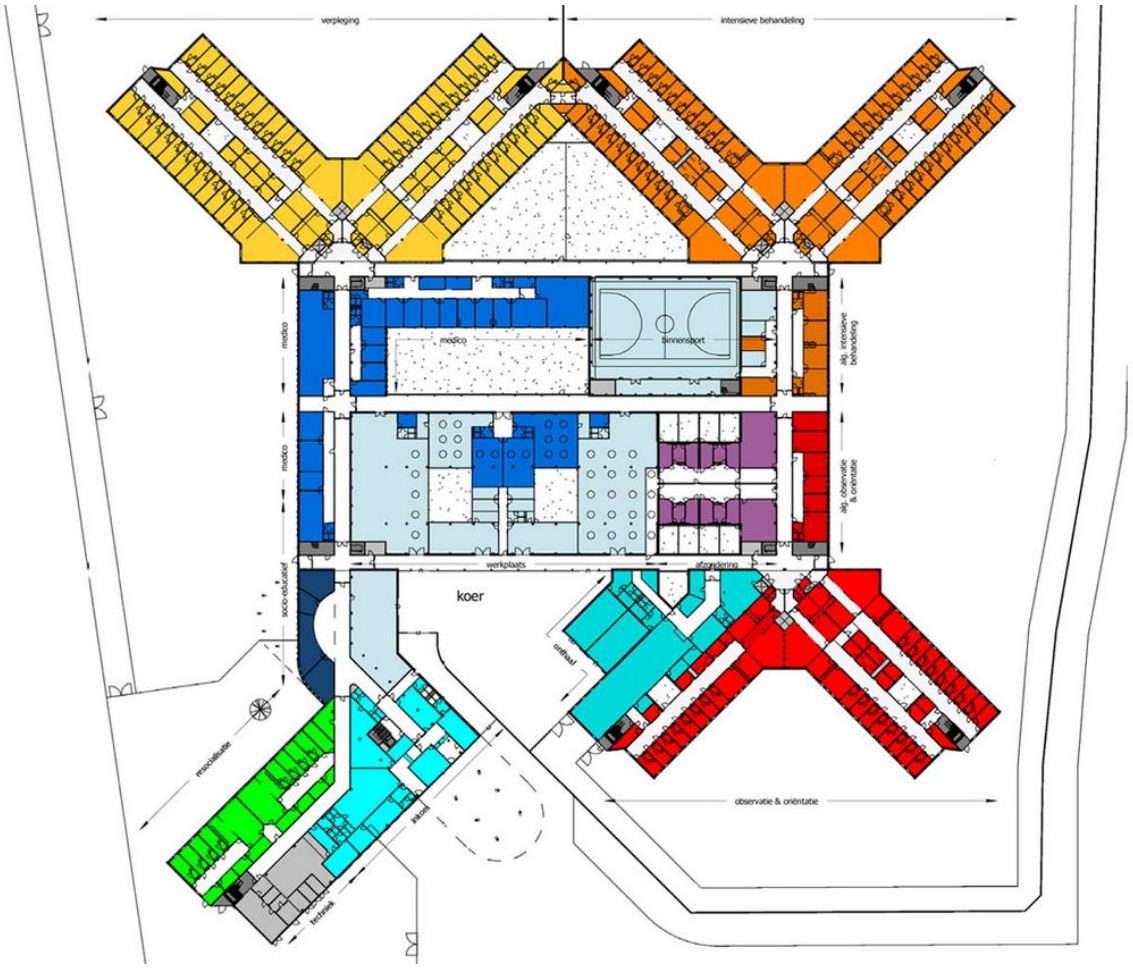


FIGURE 7.2 - GROUND FLOOR OF THE FPC GENT. IMAGE: WWW.DJGA.NL, ACCESSED 28-5-2015.

In Warnsveld, the office has designed an FPA – a smaller clinic with a lower level of security. FPA 'De Boog' is designed to resemble common housing. Even though it features closed departments and its patients are not supposed to leave the grounds, the designers have managed to minimise the amount of fences and walls. The red brick and timber window- and door frames contribute to the warm feel.

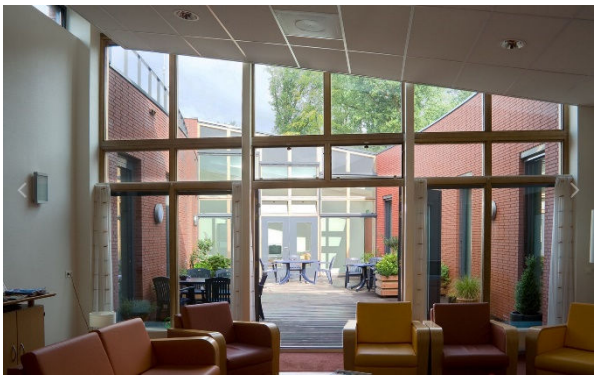


FIGURE 7.3 - ZIB-FPA DE BOOG. IMAGES: WWW.DJGA.NL, ACCESSED 28-5-2015.

'De Boog' is embedded in the slightly sloping terrain. As a result, approaching visitors do not see walls and fences, but simply a small parapet. Behind it, there is an enclosed garden on a lower level. There is also a smaller, more private courtyard, offering variation. This freedom to choose where to go is an important asset.

The effort to resemble a regular community is most visible in the office's design for a psychiatric centre for youths in Heerhugowaard. From the outside the Transferium Jeugdzorg is effectively a closed block, but from the inside it is perceived as a small street with houses, a school and even sports facilities. In each of the houses, a small group of youths share a kitchen and a living room behind their own front door.

FIGURE 7.4 - TRANSFERIUM JEUGDZORG, HEERHUGOWAARD. IMAGE: WWW.DJGA.NL, ACCESSED 28-5-2015.

Effort has been put in the creation of a friendly atmosphere, without the walls and fences that are typical for penitentiary institutes. Instead of having sturdy, concrete bedrooms with the furniture bolted to the floor, the designers have created a purpose-built piece of furniture that combines bed, table, chair and even TV in one timber construction. The street, too, has a very friendly feel, because of its meandering footpath, the use of colour and the presence of much living green.

FIGURE 7.5 - INTERIOR TRANSFERIUM JEUGDZORG. IMAGES: WWW.DJGA.NL, ACCESSED 28-5-2015.

7.3 Reference Projects

As mentioned, inner city clinics don't possess a common architectural style: they are designed to blend in with their surroundings. In this paragraph, a selection of relevant projects is discussed. The projects are relevant because of their programme, the way of embedding in the urban tissue, or because they possess an architectural theme that can be of value for forensic institutes. Most projects are located in the Netherlands; forensic care in many other countries is conceived rather differently and results in different architectural solutions (Theroux, 2015).

FIGURE 7.6 - THE MENTRUM PSYCHIATRIC CLINIC (2007, VAN PANHUYS & BAIS AND DE JONG GORTEMAKER ALGRA). PICTURE BY AUTHOR, 11-5-2015.

An example is a clinic for up to 100 patients on the Eerste Constantijn Huygensstraat in Amsterdam, part of healthcare organisation Mentrum.[11] Its size is comparable with that of the Prinsengracht Hospital, although it doesn't feature any gardens. The Mentrum Clinic was designed by Eva van Panhuys and Rob Bais in collaboration with De Jong Gortemaker Algra architecten en ingenieurs and was finished in 2007. It matches the other new buildings in the street in terms of size, scale and appearance (Mens & Wagenaar, 2010). At first sight, it is not evidently health-related, as it is very similar to the apartment buildings around it. When one looks more closely though, there are some rather clear differences: most windows are blinded to prevent people from looking in, the ground floor does not feature any shops, and there is an ambulance entrance at the back. The building is not accessible to the public. Visitors have to report at the reception before the door to the waiting area is opened.

FIGURE 7.7 – THE CLOSED DEPARTMENTS OF THE WAH (LEFT) AND THE AGNIETENSTRAAT WITH THE CENTRAAL MUSEUM AND THE DICK BRUNA HUIS, RIGHT NEXT TO THE CLINIC. PICTURES BY AUTHOR, 9-5-2015

[11] A visit to the Mentrum clinic is planned for the end of June, 2015. Reference will be updated afterwards.

An intriguing intervention in a historic context is the new Willem Arntsz Huis, a centre for psychiatric care in the historic inner city of Utrecht. The modern, colourful building was designed by VMX Architects and opened in 2007. Special attention was given to the integration in the urban tissue.[12]

FIGURE 7.8 - THE NEW WILLEM ARNTSZ HUIS IN UTRECHT (VMX ARCHITECTS, 2007). IMAGE: WWW.VMXARCHITECTS.NL, ACCESSED 12-5-2015.

The 14.500 m^2 building has a cross-shaped floorplan, defining four courtyards. Two courtyards are public space, the other two are collective gardens for the inhabitants. The edge of the block is defined by existing buildings, including residences, the Dick Bruna Huis, and an architect's office. There is a gradual transition from the crowded streets – the Oudegracht and the Centraal Museum are just a stone's throw away – to the quiet entrance of the complex.

In city centres however, this sort of clinic is not very common – the example of Utrecht is, in many ways, an exception. In the inner city of Amsterdam, most psychiatric facilities operate as a policlinic and offer ambulatory care. The Inforsa policlinic at the Keizersgracht shows how these functions can be part of the mixed use policy of the Canal Belt.

FIGURE 7.9 – FPK DE MEREN. IMAGE: WWW.BING.COM/MAPS, ACCESSED 13-5-2015.

Forensic clinics with higher security levels are often located closer to the edge of town, like the FPK 'De Meren' in Amsterdam. The clinic was designed by Han Westelaken (Architecten aan de Maas) and

[12] A visit to the Willem Arntsz Huis is planned for June 5th, 2015. Reference will be updated afterwards.

was opened in 2001. This clinic offers its clients the care they require, but also feature a relatively high level of security.[13]

In many clinics, gardens and courtyards play a large role. The relationship with outside and nature requires a large amount of precision and control because most patients are not allowed to leave the premises. But also in public buildings, courtyards can bring serenity, light and a green environment inside the building. A very good balance has been achieved by Jos Bedaux and Jan van der Laan in the main building of the University of Tilburg. The main entrance of the building is located in a courtyard – accessible through a gate – and immediately faces a second courtyard. The upper floor appears to float over the bright and open ground level, where the borders between inside and outside disappear. However, the materialisation provides the building with a very familiar and friendly atmosphere.

FIGURE 7.10 - MAIN BUILDING, UNIVERSITY OF TILBURG (1958, J. BEDAUX & J. VAN DER LAAN). VIEW FROM MAIN ENTRANCE TO SECOND COURTYARD. IMAGE: WWW.JOSBEDAUX.NL, ACCESSED 27-5-2015.

For detainees or clinical patients, it is important to have a feeling of 'being home' to support the healing process and to be able to return to society at a certain point. The definition of 'home' is, however, difficult in the case of an involuntary stay: reason for the office of Personal Architecture to research that in their design for the Superkubus in Rotterdam.

Their design involves the housing of 21 ex-detainees in a relatively protected environment, in order to prepare them for their normal lives as part of society. It is located in one of the famous cube houses by architect Piet Blom, opened in the 1970's. The redevelopment by Personal Architecture does not only provide 21 individual rooms, but also a number of shared facilities to trigger a small

[13] A visit to De Meren is planned for the end of June, 2015. Reference will be updated afterwards.

community. The design itself is very clear, because the office managed to keep to one simple intervention to provide circulation, daylight and a number of facilities.

FIGURE 7.11 - SECTION AND PATIENT ROOM OF THE SUPERKUBUS (2014, PERSONAL ARCHITECTURE). IMAGES: WWW.PERSONAL-ARCHITECTURE.NL, ACCESSED 18-5-2015.

The Dutch approach to forensic care resembles the Scandinavian approach. This is clearly visible in the design for a high-security FPC near Stockholm, Sweden, by BSK Arkitekter. The 17.000 m^2 complex was opened in 2012 and has a very strong connection with nature. The designers have designed it according to very clear principles, with much more attention to the patient environment and social interactions than is common in, for example, American institutes.

FIGURE 7.12 - FLOOR PLAN OF FPC HELIX (STOCKHOLM, 2012, BSK ARKITEKTER). IMAGE: WWW.ARCHDAILY.COM, ACCESSED 13-5-2015.

8 Conclusion

In the 19th century, the Prinsengracht Hospital was one of the more spacious and modern hospitals, and offered facilities that were ahead of those of other hospitals in Amsterdam. However, during its lifetime, the medical world developed rapidly and it became very difficult for existing hospitals to stay up to date. Its clever organisation allowed the Prinsengracht Hospital to accommodate many of the changes and to remain in business for a long time, but it has always been a struggle.

As a *cure*-providing institute then, the Prinsengracht Hospital has too many issues to be favourable – a conclusion that has been drawn several times over the last six decades and that eventually led to the premises becoming vacant. However, the complex still has value as an environment for *care*.

Patients and staff mainly recall the familiarity of their treating doctors and colleagues, as it is the most direct contact that patients have with the hospital. Even so, their environment definitely played a role in their overall perception of their stay, but rather subconsciously. The Prinsengracht Hospital offered its patients a very pleasant atmosphere to receive nursing, and its staff a working environment that was comfortable and adequately equipped.

This environment is not created by any single tangible built element. In other words, there isn't any specific element that needs to be preserved in order to maintain the atmosphere. The pleasantness of the hospital environment is experienced at a different level: it is complex and mysterious, it offers peace and quiet but does not separate from city life. Most importantly, it offers its uses choices and possibilities. A patient can seek privacy in their rooms, or social interaction in the restaurant. They can reflect in the peaceful garden or look out over the crowded streets. The building offers different qualities for different patients, rather than a generic environment that treats all patients as equal. At this level, the hospital architecture plays a role that is just as significant as the interaction with staff or the quality of the healthcare: it makes patients feel comfortable and at home.

In the redevelopment of the complex, this is the key asset that should be preserved. Not any specific tangible element, but the variety, the options, the freedom within the boundaries of the premises. In that sense, the essence of providing care has not changed that much since Leliman's original design from the 1850's. The building is still suitable for its initial purpose, even if it has grown into an architectural and functional mess and needs to be cleared of a lot of clutter.

By becoming a small-scale, inner city clinic for forensic care, the existing qualities of the Prinsengracht Hospital can be preserved and exploited, and it can remain in function as a safe place for people who cannot make it on their own. In doing so, one of the issues of the municipality of Amsterdam is addressed, and a group of vulnerable people is given an adequate home. The story of 'De Gracht' is to be extended once more.

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