# *The Dutch influenced context of Wesfort: The influence the Netherlands and its colonies on the design principles of Wesfort Leprosy Colony in South Africa.*

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## Abstract

When Sietze Wopkes Wierda designed the Wesfort Leprosy Asylum he was building on his own and the collective Dutch building experience regarding Closed institutions. The influence of the Reformed Church Mental hospitals of the Christian Organization for the Care of Nervous and Mental Patients and their system of building village like closed institutions seems profound. There are also many similarities between Wesfort and Leper asylums built in the Dutch colony of Surinam.


## Introduction

The founding of the Wesfort Leprosy Asylum was done in a period that was a turning point for the history of South Africa. The Zuid Afrikaanse Republiek was breaking free from its colonial ties and was forming its own modern nation. In order to achieve these high goals in this young nation help was still needed from the old world. Highly trained staff was still scarce in the young Transvaal republic. Skilled staff that was not yet available within the republic was especially needed for the ambitious new government building department, the Department of Public Works (Departement Publieke Werken). In the late 19$^{th}$ century relations with England where at an all-time low after the first Anglo Boer War (1880-1881), the eye was cast on the founding colonial power of South Africa, the Netherlands. The Netherlands had significant ties with the Transvaal republic, the most important of which was its language. Both countries spoke Dutch although the South African variety had gone through many changes from the original Dutch. This new developing African language would later form a new language closely related to Dutch, Afrikaans.

Sietze Wopkes Wierda was one of the architects and engineers that was attracted from the Netherlands to the Transvaal to help shaping the new country. This was done through the Department of Public Works (1.). He worked on the border between his old world Dutch training, references and experience, and the immense opportunities of a quickly developing nation. His experience came from large and small engineering and architecture projects in the Dutch province of Friesland and the capitol of the Netherlands Amsterdam.

In 1896 Wierda made the design for the new Wesfort Leprosy colony near the Transvaal Republics capitol city Pretoria. The base for his design of the complicated proposal was probably his long experience as an engineer and self-educated architect in the Transvaal and in the Netherlands. It is interesting to see how his and the general Dutch building tradition is expressed in his Transvaal design. This led me to the following research question: “How does the location design of the Wesfort Leprosy Asylum of Wierda compare to its contemporary and to older leprosy institutions in the Netherlands and its sphere of influence”.

**1. The Department of Public Works.**

This question will be answered by not only looking at the Netherlands itself but by also looking also at its colonial sphere of influence. Because of the large colonies that where occupied by the Netherlands it is also important to look at Dutch influenced architecture there.

The method used for this these is literature research combined with the research of image archives.

Firstly the history of leprosy institutions before the 19$^{th}$ century will be described in order to put later developments into context.

Secondly the new enlightened 19$^{th}$ century concepts about closed institutions, that influenced

the design of leprosy asylums and other closed institutions in the Netherlands will be discussed. These 19th century renewals will lead to the development of new modern closed institutions in the Netherlands and leprosy asylums in its colonies that were the contemporaries of Wesfort.
Thirdly some attention will be given to the Pretoria Lunatic Asylum that Wierda designed before he designed Wesfort.
Fourthly I will be placing Wesfort Leprosy Asylum within the context of the late 19th century institutions in the Netherlands and its colonies. Finally the main research question will be answered in the conclusion.

## Leprosy asylums up until the mid-19th century

Leprosy has not always been present in the Netherlands or North-Western Europe although it is a disease that has been present in hotter climates for thousands of years. The origins of the disease can most likely be traced back to the Egypt of 1500 BC according to Israëls. He describes that it first came to North-Western Europe along with the crusaders in the High Middle Ages after the first crusade on Jerusalem that started in 1096. After the disease arrived in North-Western Europe and the Low countries it was dealt with in numerous ways.
Israëls further describes that the first institutions for people infected with leprosy were founded in the Low Countries in Gent in the 12th century and in Antwerp in the 13th century. The prosperity of the southern half of the Low Countries in these days contributed to the quicker spread of the disease because of the high population density in these cities combined with poor hygiene. Trade with foreign nations where leprosy was more widespread also contributed to the spread of leprosy throughout the southern Low Countries. From the 15th century onward leprosy institutions were also founded in the northern part of the Low Countries as the prosperity of this part of the Low Countries grew. This growth of the prosperity, first in the southern and later in the northern Low Countries, coincided with the forming of a more organized regional and local government and religious organisations that were technically able to found and manage leprosy institutions. The new found wealth combined with a more organized state formed a more civilized society where people started taking care of the need of the less fortunate in society, such as leprosy sufferers. Another contributing factor was the rise of a civilian society instead of a society based on nobility and serfdom. Because of this the gap between the ruling class and the poorer classes became smaller the poorer classes became more visible making it harder to ignore their problems. Because of the suspected contiguousness of the disease and the growing contact between the rulers and infected people isolation of the patients was wanted. Every large city and most small cities founded their own leprosy institution from the 13th and 14th centuries onward during these early years of prosperity in the Low Countries. Most of the institutions from the 14th and 15th century were abandoned or demolished in the 17th century, as leprosy became less endemic in the cities. This most likely was caused by the same prosperity that caused leprosy to become more endemic in the Low Countries in the first place. Because of the increased wealth more attention was given to hygiene and the fact that more proper housing was build an environment was created that was less susceptible to contagious diseases like leprosy. This meant that the amount of lepers became so low that it was no longer needed to maintain expensive institutions purely for lepers. The remaining lepers were placed in other institutions or could be isolated at home while still receiving subsidies from the city (Israëls, 1857, pp. 164-166).

Most leprosy institutions in the northern Low Countries were founded outside the city walls. Although there are a lot of similarities between the leprosy institutions in different cities they have also many differences, mainly their location, the amount of freedom the patients had, and the additional functions housed inside the institution. Firstly there was the location, the leprosy institutions were almost always built outside of the city walls. The distance outside of the city walls varied. In Holland they were mostly located very close to the city walls separated from the city only by these walls and the city moat. They were usually located along the main road leading to a city gate and if possible also along a canal leading to the city. This location enabled the inhabitants of the leprosy asylum to ask for donations both from

people passing along the road and from boats passing by over the water. The level of freedom the patients had varied between institutions although most of the times it was quite high. The lepers were usually not locked up in the leprosy institution. They needed to be able to move around freely in order to ask for the donations that in part funded these leprosy institutions. They could ask for these donations outside the city walls along the road or the canal, or even inside the city with distinctive clothing and items marking them as contagious leprosy patients. Although the freedom was generally high some leprosy asylums where closed in by large walls giving less freedom to their inhabitants. Inside the leprosy asylum a lot of functions where usually housed. Although this could vary greatly depending on the size of the institutions, most leprosy institutions would work as separate self-containing communities having the same functions as a small village. The functions would usually include a chapel, bakery, staff housing, a kitchen and stables. Sometimes it also included farm land, fishing spots and orchards that were cultivated by the leprosy patients. The goods that were produced were consumed and the surplus was brought to market according to van Leeuwen. At the time people believed that as long as you would stand downwind from a leper you could not get the disease so it was considered safe to eat the products cultivated by the patients.

Besides the larger leprosy institutions that were founded and managed by religious institutions and later also city officials, there also were smaller facilities that only housed a few patients. These were usually located in small towns or hamlets. These asylums were often no more than ordinary houses, or a farm that provided space for lepers. They differed greatly from the institutions in the city. The village institutions had no primitive medical care and structure for the patients and they did not have a guaranteed income from a city or religious organization. While the quality of life in the leprosy institutions in the city might have been reasonable these village institutions would not offer much of a life to the sufferers. Most of these small asylums were founded before the large city institutions and sometimes the city institutions would have grown from these smaller asylums (van Leeuwen, 2013, pp. 29-34).

Although no precise drawings of these institutions remain there is one source that gives some insight into the design and layout of the institutions. This source is the collection of maps that Jacob van Deventer drew in the 16th century for the Spanish rulers of the Low Countries. On these maps most leprosy institutions were indicated and roughly drawn (2.) (van Leeuwen, 2013, pp. 29-34).


**2. The Leprosy Asylum outside of Rotterdam is marked on the map by Jacob van Deventer with "Leprozi"**

**3. The Leprosy Asylum outside of Rotterdam along the Schie Canal and the road.**

A description of how these institutions used to function in their heyday, between the 14th and 16th century, can be found in Rotterdam. The leprosy institution in Rotterdam (3.) was founded in 1356 as a chapel for leprosy patients along with housing for the lepers. If someone was suspected of having leprosy in the city of Rotterdam they were sent to the city of Haarlem to be examined by the master of the leprosy chapel in Haarlem. The master of the leprosy chapel in Haarlem had been authorized to make these decisions by the count of the district of Holland. If someone was found to be contaminated with leprosy, although false positives occurred often, they were handed a "Lazarusklep" and a note admitting them to the care of the Rotterdam leprosy chapel and allowing them to ask for charity by begging and participating in special fundraisers within the City of Rotterdam. The leprosy chapel

also had a staff member that was not infected with the disease, who would, wearing appropriate signs, ask for donation from passers-by and ships. Besides the direct donation from private persons and businesses, the leprosy chapel also received subsidies funded by the taxes raised by the city of Rotterdam. At one time it even received all the tax that was levied on haring, which must have been quite a large sum of money (Broes van Dort T. , 1897, pp. 294-296). This enabled them to build substantial wooden and also stone buildings of good quality (van Leeuwen, 2013). The patients of the leprosy chapel as a group also held a charity parade through the city each year to collect even more funds from the citizens of Rotterdam. Added together these sources of income for the care and housing of leprosy patients formed a substantial amount of money (Broes van Dort T. , 1897, pp. 294-296). According to van Dort it was probably more money per patient then hospitals received at the time of writing of his article (1897). This can also be illustrated by the fact that there was fraud committed by people pretending to have leprosy by falsely carrying a “lazarusklep” and other attributes normally carried by lepers. They did this to be able to beg for money more successfully and to receive hand-outs from the city or religious organisations (Broes van Dort T. , 1897, p. 295).

By the end of the 17th century almost all leprosy institutions in the Northern Low countries had been closed because of the decrease in the number of patients. To find out how the care for leprosy patients under Dutch influence further evolved it is necessary to look at Dutch Colonies where leprosy was still present.

After the middle of the 17th century the amount of leprosy patients in the Dutch East Indies grows rapidly prompting the need for the founding of a leprosy institution. This institution is founded alongside the main road to the city of Batavia, like the medieval ones the preceded it.

Because the medical staff in Batavia feared that the leper patients might infect the water supply of the surrounding neighbourhoods of Batavia they started looking for a more isolated location for a new institution. They found this location on the island of Purmerend, at small distance from the city of Batavia. This new institution was finished in 1681. These new considerations about the contiguousness of leprosy where confirmed in 1687 by an article was written by Willem ten Rhijne, a medical doctor in the city of Batavia. This article places an emphasis on the contagiousness of leprosy and the importance of properly isolation leprosy patients to protect healthy person from contracting the disease.

Whilst the first institution was built out of wood and bamboo the new institution on the island of Purmerend was built out of brick. The policy was that patients, both natives and Europeans, would be fully taken care of, but they had to first donate al their positions to the asylum. Richer patients could also build their own houses and provide for themselves on the terrain of the institution. The new institution on Purmerend Island housed 165 patients in 1681 which went down to 100 patients in 1720. The institution was closed in 1795 when only 11 patients remained (Broes van Dort T. , 1898, pp. 1-28).

New institutions were founded on the islands of Malakka (1697), Ambon (1701), and Ceylon (1708) and on the coast of Malabar (1724). These islands where conquered from the Portuguese between 1640 and 1662. Most of the new leprosy asylums were quickly abandoned what would also indicate that hey where most likely not substantial structures. The leprosy institution on Ceylon however was a substantial building made of brick. It even was much more substantial than needed as it housed 25 patients in 48 rooms that each could contain up to 20 patients. This was to the disliking of the central colonial government in Batavia who considered this a waste of public money (Broes van Dort T. , 1898, p. 31).

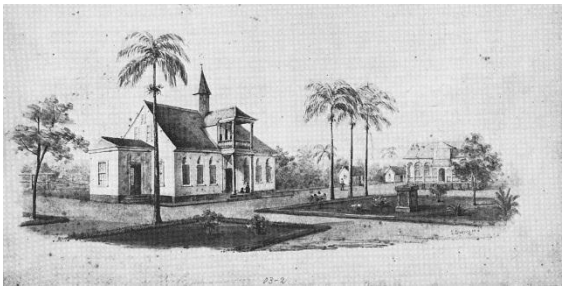
During the 19th century, as the number of patients kept going down, no new leprosy institutions were built by the government in the Dutch East Indies. In 1856 the Medical council in Batavia even decided that they no longer considered leprosy to be a contagious disease requiring isolation of the patients. Remaining leprosy patients were placed in normal hospitals. Although there were no government actions to isolate leprosy patients anymore, there is one example of a relatively large scale isolation of patients funded with private money. This new institution was built by a group of tobacco planters because of the growing numbers of leprosy sufferers on their plantations. They

isolated the lepers in a newly built hospital that was expanded in 1895 to accommodate 190 patients. Most patients were ne immigrants of Chinese origin that took the disease with them. This confirms the strong confusion about the contagiousness of leprosy. While the medical council of Batavia had decided that leprosy was non-contagious local business and communities could still consider leprosy highly contagious (Broes van Dort T. , 1897, pp. 61-64).

Other areas within the Dutch colonial empire were leprosy was a significant problem were the Dutch colonies in South America. Leprosy was a problem on the Dutch Antilles and in the plantation colony of Surinam.

The first mention of leprosy on the Dutch Antilles on the Caribbean island of Curaçao is from 1770 and it describes a sharp rise in the number of leprosy patients on the island. The rise in the number of patients is attributed to the import of slaves from Spanish held territories where leprosy was present. The local government became worried about the health of the residents of the island and gave out a decree ordering people with leprosy to report this to local officials. In 1781 a leprosy institution was opened on a peninsula 300 meters from the capital city Willemstad. This building not only functioned as an institution for lepers, but also as an asylum for mentally ill patients until 1809. All slaves and black man that had leprosy or mental illness where required to be locked up in this new institution. Whites were allowed to stay in their own homes as long as they stayed away from public places. If they did not stay away from public places they were also locked up in the institution. Fines and physical punishments where instituted to enforce these new leprosy laws. This confirms a process of racial stereotyping that is prevalent trough out the 19$^{th}$ century literature on the subject of leprosy. The segregation of leprosy patients seemed to have been successful as the neighbouring Caribbean islands of St. Eustatius, St. Martin and Saba also implemented this policy of segregating lepers. In 1896 there where a combined total of 36 patients in the leprosy institutions on the Dutch Antilles (Broes van Dort T. , 1897, pp. 384-388).

**4. Batavia Leprosy institution seen from the Coppename River**



**5. Church and administration building in the Batavia Leprosy Institution**

The other Dutch colony in South America were leprosy was a significant problem was the plantation colony of Surinam. The percentage of the population that suffered from leprosy was much higher in Surinam than in the Dutch Caribbean Islands. The Dutch Antilles islands had a percentage of leprosy sufferers of 0,08% in 1896 while Surinam had a percentage of 0,72-2,86% in 1896 (Broes van Dort T. , 1897, pp. 388,408). This meant that there was much more urgency to tackle the problem in Surinam than there ever was on the Dutch Antilles. The source of the disease in Surinam was believed to come from infected slaves brought over from Africa and other trading points, as well as Chinese workers that picked up the disease in other colonies. In 1791 the Lutheran congregation of Surinam requested the governor of Surinam to come up with a solution towards fixing the ever growing problem. He responded the same year by opening Surinam's first leprosy institution on the plantation of Voorzorg. The new asylum was at first only meant to house slaves with leprosy (Broes van Dort T. , 1897, p. 408). The population of Voorzorg grew fast from 200 in 1792 to 500 in 1812.

In 1823 all the patients from Voorzorg were moved to a new location on the plantation Batavia (4.). This was needed because escape from the institution was easy in Voorzorg as it was relatively close to the capital of Surinam Paramaribo. The

new Asylum Batavia consisted of wooden houses for the doctor, staff and wealthier patients. The les wealthy patients were housed in unhygienic huts that they had to build themselves (Broes van Dort T. , 1897, p. 408). The layout of Batavia was also described. It consisted of a church (5.) of 16x10 meter that also housed the clergy. The church was flanked by tall palm trees and behind the church there was a grave yard. There also was a school building of 6x4 meter, a hospital of 13x8 meter, a store room of 10x10 and a Doctors building of 14x11 meters located 75 meter from the church. The housing for wealthier patients was built in five blocks of 20x5 meter and one block of 30x5 meters. Al these buildings were placed around a central square and were painted white. The houses for the poorer patients were built outside this central square and consisted of 50 huts of on average 6x4 that were built of logs and foliage. The 50 huts were divided up into four sectors and each sector had its own cooking facilities. Although the facilities for the wealthier patients were reasonable, the facilities for the poor patients where unhygienic and primitive (ANDA Suriname, 2014).

Besides the leprosy facilities in the Dutch overseas colony's there also was a new leprosy asylum founded in the Netherlands during the second half of the 19th century, after there had not been a dedicated facility for lepers in the country for more than a hundred years. The new leprosy asylum was located in the institutional town of Veenhuizen in the relatively remote Dutch province of Drenthe, in the north of the country. The leprosy asylum in Veenhuizen was founded in 1867 and was closed again only 19 years later in 1886. The building was a simple plastered building with a gable roof (6.). It was founded because a growing number of leprosy patients had turned up in Dutch hospitals. Veenhuizen housed a total of 15 or 16 patients of whom 15 where their on a voluntary basis. The other one or two were lepers convicted of begging and petty crime and sent to the leprosy asylum in Veenhuizen to serve their sentence. The voluntary patients where free to leave the asylum and the convicted patients could also leave after they had served their sentence. It was however attempted to make them reconsider their decision to leave and stay in the asylum. They could not leave by themselves however, as Veenhuizen was part of the Government Work House which was a closed institution. Al of the patients had caught the disease in the tropics. Their stay at Veenhuizen was made as pleasant as possible by providing them with good food consisting of properly proportioned amounts of meat, rice, soup, milk, coffee, beer and a variety of vegetables. There was a landscaped garden around the building for recreation. There also was a well-appointed library for the more educated inhabitants. If they could work the patients spend time making parts for tobacco pipes. The asylum was closed in 1886 because a new law forbade people residing in a Government Work House, which all of Veenhuizen was, who could not physically work. The remaining patients were released or sent to normal hospitals (Broes van Dort T. , 1897, pp. 650-651).

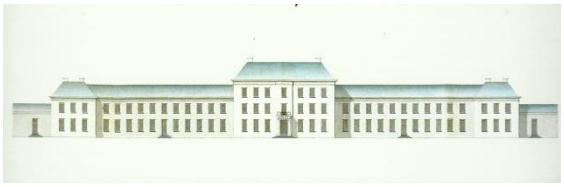
**6. The Veenhuizen leprosy asylum**

## Developments in the 19th century

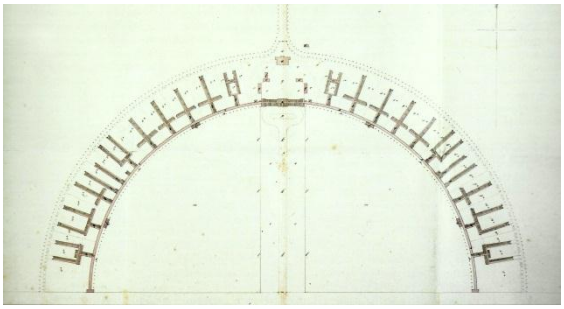
The 19th century brought some new ideas about how to deal with the isolation of groups of people, such as lepers. No leprosy institutions where build or operating in the Netherlands, except for the small asylum in Veenhuizen that was mentioned before. To still be able to look at the influence of these new thoughts on handling patients that needed isolation it is necessary to broaden the scope of research to other closed institutions. Therefore I will be looking at another patient group that required isolation because of their illness, patients with mental disorders. During the 19th century a lot of new mental institutions where build in the Netherlands providing an insight into the practical application of these new thoughts about dealing with patients that required isolation. From the late 18th century onwards more research was done towards healthier and more humane

treatment of patients. Instead of just locking up the unwanted groups of society, so they would no longer be hazards towards society, the concept of trying to heal them developed. Before this it was though that mental patients could not be cured. During this time new concepts were developed toward a moral treatment of patients, to heal them from their bad habits or decease. This moral treatment consisted of providing the patients with a healthy and disciplined environment. This started in France where for the first time statistic became available about the birth-rates and life expectancy in different areas of Paris. These new statistics indicated that the crowded areas of the city with narrow streets and poorly ventilated houses had a much lower life expectancy then the less populated areas with wider streets and more open areas. This was explained with the idea that the "bad air" could not escape in the narrow and crowded neighbourhoods while it was simply blown away in the less crowded and more open neighbourhoods. This gave way to new theories about hospital design. The old closed off crowded urban hospitals designed to only contain the patients gave way to new concepts of a healthy healing environment. Early concepts often consisted of either buildings with a radial plan and or pavilion style buildings. These pavilion style buildings no longer housed all the functions in one building. Instead the functions where spread over separate building often in a repeating pattern placed in an open and airy landscape (Mens, 2003, pp. 15-17).

In 1825 the first Dutch plan (img 7.,8.) was made for this new type of mental hospital by R. Scherenberg. This new institution was designed to provide medical care for patients that needed to be locked up for their own safety and for the safety of the society. Scherenberg based his design on humane and hygienic principles. Although the patients are locked inside, the institution should not feel like a prison and al safety measures should be hidden from patients whenever possible. The location of the institution was also important. It should be located in a place with good ventilation away from sources of "bad air". Sources of bad air could be cities, industry and swamps. Halfway up a mountain or hill was the ideal location because it provides optimal ventilation. In flat countries such as Holland the institution should be located in nature away from swamps and stagnant water but close to flowing water. The patients should also be able to do outdoor work as this gave the patients a sense of purpose and discipline and it therefore had a healing effect. Because of this the institution should provide large fields for fit patients who can do hard labour, horticultural lands for weaker patients and gardens for planting flowers for the weakest patients. These gardens should also provide a place for all patients to walk and exercise. He proposed that al patient buildings should be no more than one story high to prevent patients from getting the feeling they are locked up. The main administration and facilities building however can be two or more stories. The patient pavilions should be connected to the main building by covered walkways that can also provide a place for outdoor exercise when it is raining. The individual patient rooms should have windows on opposing sides to make sure there is enough ventilation. Because the theory of "bad air" dictated that he worst air was near the floor there should also be ventilation hatches with metal fences at floor level that could be opened to let the "bad air" out. The design separated different groups of patients as well as men and women. Later there would also be separation according to social and financial class. The plan of Scherenberg combines the radial approach with the pavilion style (Mens, 2003, pp. 21-23).



**7. Façade of the 1825 design by R. Scherenberg**



**8. Plan of the 1825 design by R. Scherenberg**

It was not until the late 19th century that new institutions outside of the city began to be built on

a larger scale. At this time there were other changes in Dutch society as well. Much more than before the society became based around a pillarization of the four main groups in society. These social groups were Protestant, Roman-Catholic, Liberal and Socialist. Of these four social pillars the first two were the largest and the most influential on the changes in the design of closed institutions in the Netherlands. Up until the last quarter of the 19th century religion had been of only minor importance in the design of government sponsored closed institutions. Many institutions did not have a dedicated chapel and if they had attendance was relatively low. Religious fanaticism was even considered as a source of the mental problems of some patients (Mens, 2003, pp. 91-92).

This changed when in the late 19th century religious organizations belonging to one of the two religious pillars began building their own closed institutions instead of national or local governments. The two most productive religious organizations where the Reformed Church (Gereformeerde Kerk) that separated itself form the Dutch National Protestant Church (Nederlands Hervormde Kerk) and later also the Roman Catholic Church. Within these new institutions religion was no longer of minor importance. The daily life in the institution was based around religious practice that was considered as an important element of the healing process. These organizations were well-funded and wanted to broaden their influence on society. This meant that a lot of new institutions belonging to a religious organization where build during the late 19th century. These new institutions where almost all build according to the pavilion style, and they were built in rural and natural settings. The church or chapel took a central position within these new institutions.

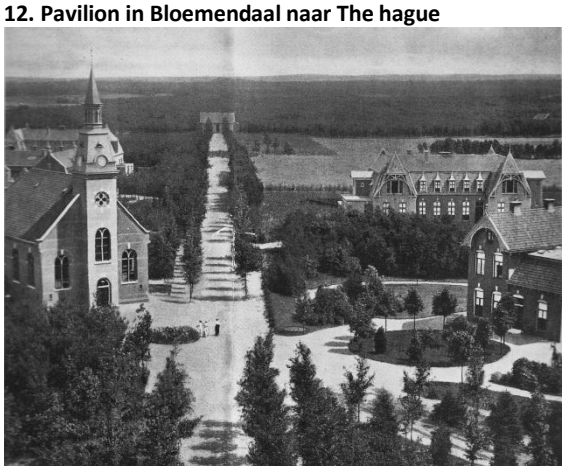
Before the end of the 19th century five new institutions had been built by the Christian Organization for the Care of Nervous and Mental Patients, part of the Reformed Church pillar. The first of these institutions was located near Deventer and was built to a strict symmetrical pavilion plan in 1892 separation man and women on sides of a central axis. The following four institutions where build according to a looser plan. These looser plans where still build in the pavilion style but where build to have a village like atmosphere. The patients were housed in pavilions according to patient group, class and sex. The patient pavilions and the administration buildings where arranged around the central church and connected with paths and roads in a park like setting. By creating separate buildings for each function the institutions created an environment that was les institutional and more like the life the patients were used to. This village like setting with relatively small patient pavilions was designed to create a more normal family setting for the patients. This provided the patients with an environment that could create good morals end behaviour with church attendance and a healthy village life. While theses villages provided a rural and natural atmosphere they were usually located near large cities with short road or train connections.

**9. Veldwijk Church Ermelo**


**10. A Pavilion in Veldwijk near Ermelo**


**11. Aerial view of Bloemendaal near The Hague**

**12. Pavilion in Bloemendaal naar The hague**



**13. Church and pavilions in Dennenoord near Groningen**

**14. Administration building in Dennenoord**

**15. Aerial view of Wolfheze near Arnhem**

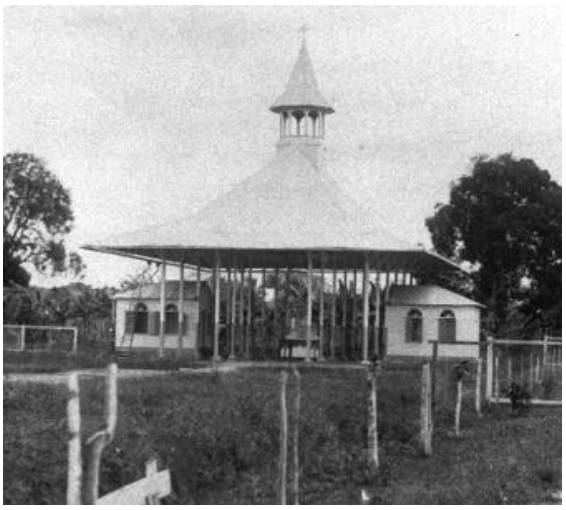
**16. Church and pavilions in Wolfheze near Arnhem**

The first two institutions build according to the more informal village plan where located in Ermelo and Loosduinen, near The Hague. They were called Veldwijk (9.,10.) and Bloemendaal (11.,12.). They were followed by Dennenoord (13.,14.) in Noordlaren near Groningen in 1895 and Wolfheze (15.,16.) near Arnhem in 1905.

Although no significant new leprosy institutions where build in the Netherlands during the 19th century, there were new developments within the Dutch colonies. Broes van Dort provides an insight into the thoughts and concepts that went into planning a new leprosy colony in the Dutch East Indies. Although government of the Dutch East Indies colony officials considered leprosy to be a non-contagious disease that therefore required no isolation, there was a fear for leprosy under the civilians. For this reason some small local leprosy asylums where founded. This prompted the medical board to suggest opening hospitals to provide these leprosy patients with medical care while satisfying the popular demand for the isolation of lepers. The brief for these new institutions suggested that they should be placed isolated enough while still being easily accessible. Furthermore these institutions should only be for lepers that require medical attention. The new institution should be arranged according to the pavilion style of hospital design and should provide treatment facilities and research laboratories as well as patient housing. As these facilities should be large enough to be able to house these extra facilities, therefore there should not be a need for more than one or two of these facilities in the Dutch East Indies colonies.

In the Dutch colony of Suriname there were developments as well. In Suriname a new Catholic institution for leprosy patents was built in the late 19th century. It was founded by the catholic mission organization Gerhardus-Majella out of humanitarian grounds. The leprosy institution was open to people of all social classes and ethnicities on a voluntary basis. It housed 24 patients in 1898. The Gerhardus-Majella leprosy asylum was built in two main phases. The first phase was completed in 1895 and consisted out of two rows of five houses with individual verandas around a central courtyard (17.). These wooden houses had windows that could be closed with louvered shutters and a gable roof with a ventilator window. The courtyard and surrounding buildings where located on a square island surrounded by a moat. A bridge was placed on the open side of the courtyard providing access. Inside this courtyard there was an open air church (18.) consisting out of a raised square hip roof with a tower and small closed buildings on both sides. These two building might have been used to store medical supplies and other necessities for the asylum as there were no further buildings besides the patient houses on the island. Next to the island there was a small village where the staff would have lived.

**17. The leprosy asylum Garardus-Majella**



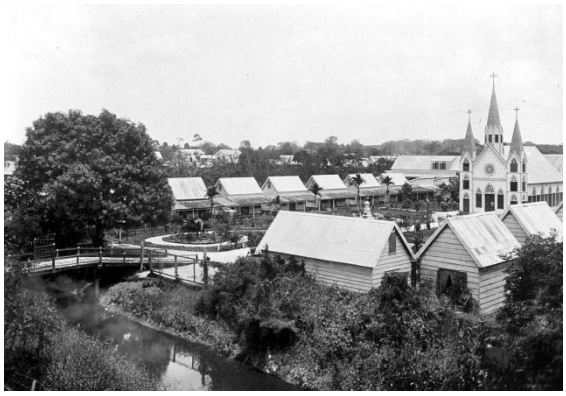
**18. The open air "Hygienic" church in the Garardus-Majella Leprosy asylum**

In the second phase of the development of the Gerardus-Majella asylum eight more patient houses were built (19.), this time without the ventilator windows. Three were built on each side of the courtyard extending the existing rows. Two more were built next to the bridge at a 90 degree angle to the rest of the houses closing of that side of the courtyard. Besides the new houses a new church was also built at the other end of the courtyard replacing the existing church. This new church was no longer open on all sides. The courtyard itself was elaborated with an ornamental garden with paths. The verandas of all the houses were connected creating a covered walkway (20.) with an opening towards the bridge. This walkway was later also connected to the sides of the new church building. Four more patient houses with a shed instead of a gable roof were added after this extension. Behind the new church building two new large buildings were erected, possibly providing more facilities for the patients.

Broes van Dort considered this new institution of good hygienic quality. This institution was a great improvement over the Batavia institution. All the patients were housed in wooden houses instead of huts. Besides this, special attention was given to the hygienic qualities of the facilities. The buildings all had lots of cross ventilation to prevent contamination of staff and visitors and to provide a better climate for the patients themself. Besides this the porches of the house provided a rain free outdoor space for the patients. The later covered walkway further improved upon this. The roofs prevented the walkways from getting muddy

thereby providing a cleaner environment for the patients. The first church was open on all sides making sure there was ample ventilation again to prevent contamination and create a more comfortable environment in the hot climate in Surinam. Although the second church was now longer completely open it still had large louvered windows providing lots of ventilation whilst keeping the rain out of the building (Broes van Dort T. , 1897, p. 408).

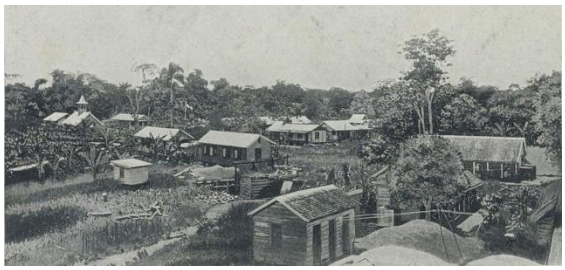
Broes van Dort mentioned that at the time of his writing (1898) that there were strong plans to close down the Batavia leprosy institution because it was out-dated and too primitive. Batavia was, like its predecessor Voorzorg, also considered to be too close to Paramaribo. This provided a hazarded to the health of the surroundings of Batavia and provided patients the opportunity for escape. There were a couple of options available for housing the former patients of Batavia. Firstly the Catholic Gerardus-Majella leprosy Asylum could be expanded. Secondly there where plans for a new protestant leprosy asylum at the remote Chatillon plantation. Thirdly the government of Surinam had plans to build a new institution to replace Batavia.



**19. More housing and a new closed church in the Garardus-Majella Leprosy asylum**

**20. Houses connected by a covered walkway in the Garardus-Majella Leprosy asylum**

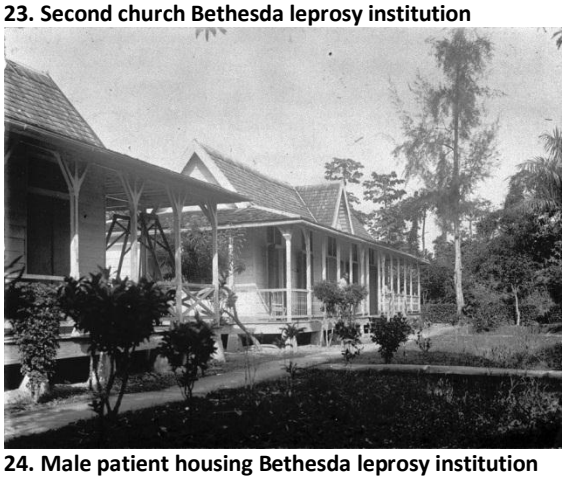
There was a description of how this new government institution replacing Batavia should be build. There should be a moat around the entire complex and the complex should contain ample sanitary facilities consisting of; Wells, rainwater collection barrels and plenty of lavatories and wash houses. Besides this al buildings should be built out of wood and the patient housing should consist out of blocks for eight to ten patients for male and for female patients. Inside these blocks individual bathrooms could be made with movable wall segments providing maximum flexibility. Besides these blocks there should also be small houses where married couples and children can live according to the village system that was also popular for protestant institutions in the Netherlands. Outside of the moated patient compound the housing for the medical director and his assistant should be build (Broes van Dort T. , 1897, pp. 68-69). The solution for replacing Batavia was found in cooperation between the government and the Lutheran Church, Dutch Reformed Church and Moravian Mission. The new Bethesda leprosy asylum (21.-25.) was built on the site of the former Chatillon plantation and was opened 1899, after which Batavia closed. The original intention to provide space for married couples and children in the small houses, outside of a strong institutional atmosphere was proved to be impossible because of large numbers of patients. The plan was abandoned as the number of patients grew too high (Weiss, 1915).



**21. Bethesda Leprosy institution in Chatillon**

**22. First church Bethesda Leprosy Institution**

**23. Second church Bethesda leprosy institution**



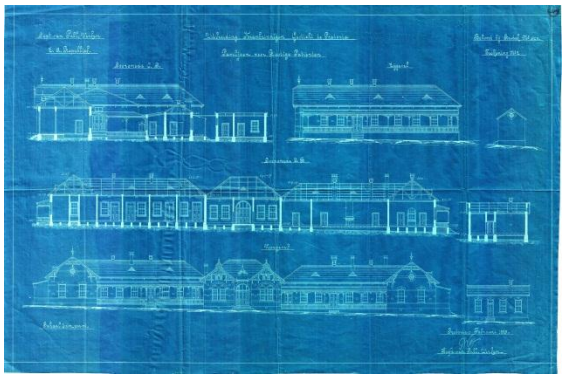
**24. Male patient housing Bethesda leprosy institution**

**25. Female patient housing Bethesda leprosy institution**

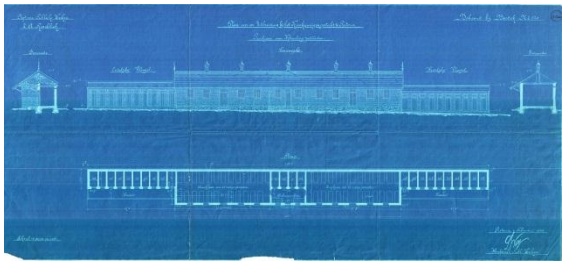
## The Transvaal context

Besides the Dutch context that has been mentioned in the previous chapters there is also some context within the Transvaal Republic itself. The Department of Publics Works that Wierda supervised also made another design for a closed institution. This design can provide some context for Wesfort. This other institution was the Pretoria Lunatic Asylum (Krankzinnigengesticht te Pretoria), a mental hospital that still exists today as Weskoppies Psychiatric Hospital.

The Pretoria Lunatic Asylum was built in 1892 3km West of the Pretoria Railway station. The Lunatic asylum was described as being a hygienic institution surrounded by well cultivated fields, 2,5Ha of vegetable gardens and large flower gardens. The chief medical officer of the Pretoria Lunatic Asylum was a strong proponent of making sure that the patients could make use of their remaining mental capacities to do useful labour. This was important to give the patients purpose, discipline and to fend off the feeling of being institutionalised (PLug & Roos, 1992, pp. 218-219). This would indicate that the institution was built the same way the Dutch Reformed mental institutions were built in the Netherlands. Like the Dutch institutions the building was surrounded by gardens for exercise and light labour and fields for tougher therapeutic labour for the stronger patients. Also like the Dutch institutions it was made of separate pavilions housing different patient groups (29.,27.).



**26. Pavilion for calm patients Pretoria Lunatic Asylum**



**27. Pavilion for coloured patients Pretoria Lunatic Asylum**

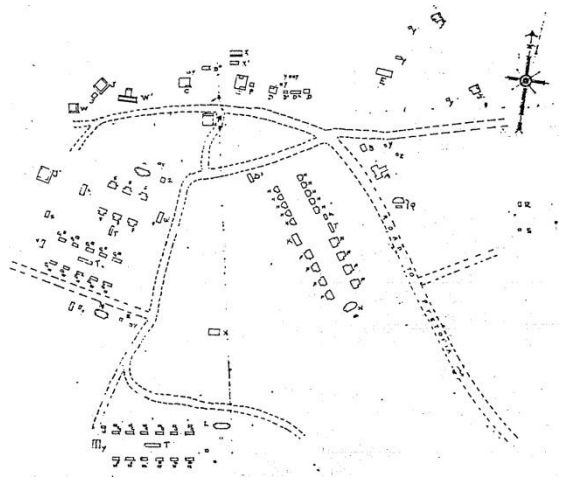
## Placing Wesfort in its context

In order to see how the design Wierda made for the Wesfort Leprosy asylum fits into the context of Dutch influenced design of leprosy asylums it is important to first look at some other factors that have shown to be of great influence on the design of these institutions. It is important to look at the way the contagiousness of leprosy was viewed in the Transvaal as it has shown that the attitude towards leprosy has been of great influence to the design of the different institutions mentioned. The limited number of leprosy facilities that where build in the Dutch East Indies during the second half of the 19th century is a direct consequence of the fact that the government consider leprosy to be non-contagious. This is in stark contrast to Surinam where Leprosy was considered highly contagious requiring strict isolation of patients. In the Transvaal republic and in the whole of South Africa the policy was even stricter than in Surinam. Isolation of al lepers in the Transvaal was required and the patients could never leave the institution. They would spend their entire life there and would be buried within the area. The reasoning for this strict policy was that there was a limited number of patients in the Transvaal and there was a relatively large budget available. This gave the Transvaal government the opportunity to "solve" the leprosy problem (Horwitz, 2006, pp. 271-272).

This policy of the strict and lifelong separation of leprosy patients resulted in the need for a properly isolated leprosy institution, unlike the medieval leprosy institutions in the Low Countries where patients could usually just walk in and out of the institution. The wish for total separation of the Leprosy patients is much like what happened in Surinam except for the fact that the budget to accomplish this was much higher in the Transvaal than in Surinam.

The location chosen for the new leprosy asylum was along an existing road about ten kilometres from the capital city of Pretoria. Much like the other closed institutions discussed this provided a location that was easily reachable for staff and visitors while it was still isolated enough to keep the lepers from escaping.

Another factor to look at in order to compare Wesfort with the Dutch influenced examples is the political and religious situation in the Transvaal. In the Dutch medieval institutions religion played a major role as the Church and the local government were deeply intertwined. This stands in stark contrast to the Dutch examples from the early 19th century that were designed according to enlightened new visions. These government run facilities were designed without considering religion as an important factor in the design. This changed in the last quarter of the 19th century when religious organisations of protestant and catholic origin began to build their own institution based on their religion. This is also visible in Surinam where the Garardus-Majella leper asylum was built by a Catholic Mission association and the later Bethesda leprosy asylum was built by cooperation between protestant organisations and the mainly Protestant government. In the Transvaal there was a combination of government funding and religious concepts. The Transvaal Government belonged to a strongly conservative protestant religion. This formed an important starting point for the design of Wesfort. Wesfort was designed comparable to the reformed church institutions in the Netherlands only with funding from the Transvaal government instead of private religious organisations.



**28. First layout of Wesfort in 1896**

**29. View of the central facilities cluster in Wesfort with the church and administration building**

**30. The open air church in Wesfort**

**31. White male block and Church in Wesfort**

To have a more in depth look at the design of Wesfort itself it is best to look at it from two differ scales, firstly the layout of the entire institution and secondly the individual buildings within this institution.

The first layout of Wesfort (28.) was designed by Wierda in 1896. It was located along an existing road to the nearby western fort that gave Wesfort its name. Along the road a central cluster of buildings was placed (29.) consisting of an open air protestant church (30.), an administration building and a laboratory. To the west of these facilities five blocks of patient housing were built. These blocks of houses functioned much like the patient pavilions that were found in the Reformed Church closed institutions in the Netherlands. A important difernce was that the dutch institutions where divided according to sex ans social class whils in south Africa race was an important factor although the race segregation would also have been a class segregation. The influence of racist theories about hygiene of and behaviour of different races was also mentioned multiple times in the articles of Broes van Dort and as considered a factor in moral and hygienic hospital design. The political climate and social structure in the Zuid Afrikaanse Republiek would have provided a breeding ground for these racist theories to put into practise.

All functions needed for a patient group were housed within the blocks. The patient groups were arranged according to sex and race. Closest to the central facilities was a block for white male patients (31.) and a block for married couples. To the north west of the facilities cluster a block for female white patients was build next to a block for female black or coloured patents. To the south west there was a block for black or coloured male patients separated from the rest of the institution by a seasonal river. There were four hospital buildings and four ablution buildings placed next to the patient housing blocks. These hospital buildings and ablution buildings were placed next to the blocks for white male and female patients and black male and female patients. There were also two recreation buildings for the white male and female patient blocks. To the north of the central facilities cluster and the patient housing staff housing is built, just outside the patient areas.

The design seems to follow the same principles as the closed institution built by the reformed church in the Netherlands and the Protestant colonial institution of Bethesda in Surinam. Like these closed institutions Wesfort was designed like a

village with separate buildings for each function. This was done to prevent the patients from feeling institutionalised and to provide them with a life that is as normal as possible. The separation of the patients housing from the central facilities consisting of the church, administration building and laboratory is much like a normal village with houses and a central church and town hall. Like the reformed church institutions the church building takes up a central role in Wesfort. The ideal of creating a normal family life as much as possible is also visible in the houses for married white couples. This followed the same concept as the houses for married couples that were built in Bethesda in Surinam.

Wierda described his vision for the Leprosy Institution as follows: To provide, in the most humane way a pleasant and attractive residence for those "unfortunates" who, through an incurable infectious disease, should be tied to it for as long as they lived (Kistner, 2014, p. 82). Although the village ideal was the base for the design of Wesfort some measures were taken that limited the free movement one would have had in a normal village. The compounds for black patients (32.) were fenced off with high chain-link fences topped with barbed wire to prevent them from accessing the rest of Wesfort at times when this was not wanted.

**32. Fenced in Black male patient block in Wesfort**

The blocks consisted of three types of houses, one type for white male and female patients, one for black male and female patients and one for married couples. The houses (33.) where designed in a local style as pleasant looking white plastered buildings with gables at each end and porches along the fronts. The same approach was used in Surinam for the Garardus-Majella and the Bethesda (34.) leprosy institutes where traditional white clapboard houses were used for the patients. The differences between these three types are the sizes of the rooms and the available facilities.

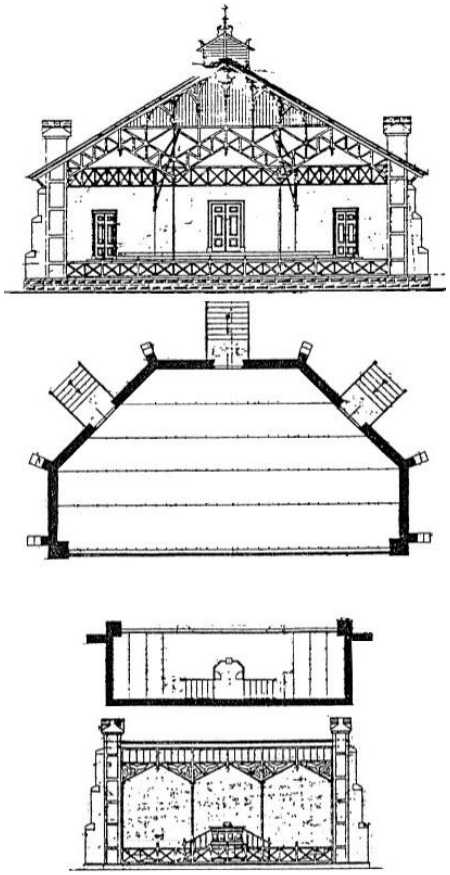
The houses for individual male or female white patients consisted out of a building containing four patients' rooms. The patient rooms consisted of a living and sleeping room of 4x4 meters and a kitchen/washroom of 2x2 meters. The houses for couples were the same but only half the size. They consisted of two rooms of 4x4 meters and a Kitchen/washroom of 2x2 meters. Lavatories and washing facilities were provided in the ablution blocks.

The houses for black patients also consisted of buildings containing four rooms. These rooms were 3 by 4 meters and did not have a private Kitchen Washroom attached to the back. Instead a free standing kitchen room was provided for every four rooms. Lavatories and washing facilities were provided in the ablution blocks.

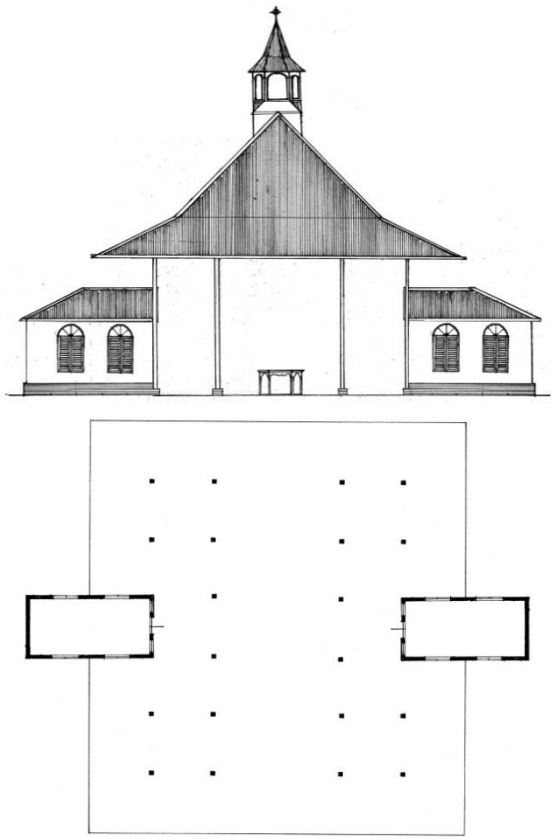
**33. Patient housing in Wesfort**

**34. Patient housing in Bethesda**

An important factor in the design of late 19th century leprosy institution was hygiene and the risk of contamination of the staff. The theory of "bad air" carrying the disease being the cause for diseases and contamination was fundamental in



**35. Façade and plan of the open church in Wesfort Leper Asylum**



**36. Façade and plan of the open church in the Gerardus-Majella Leper Asylum**

19th century hospital design. Much attention was given to properly ventilating providing a healthy environment for the patients and reducing the risk of contamination of healthy staff and visitors. This is visible in most buildings of Wesfort but especially in the design of the open church (35.). This church was designed to prevent contamination of the preacher by separating the preacher from the congregation of lepers by an open area in the middle of the church. This created a covered area for lepers and a covered area for the preacher. Lepers would enter the church from behind while the preacher could enter from the front. The building also had an open area between the roof of the patient air and the walls to make sure the "bad air" could escape.

The same concept of an open church (36.) is seen in the Gerardus-Majella leprosy asylum in Surinam. The architectural design of this Catholic Church is somewhat different but the concept is much the same, providing a healthy environment with a limited risk of contagion for both visitors and staff. The building was completely open underneath the roof and the roof itself had a ventilator turret on top to let out the rising hot air.

Ventilation was also important for the housing in Wesfort. Al the houses had windows on both sides providing cross ventilation. The houses also al had porches providing a clean and dry area in front of the house to be outside during rain. The roofs of the houses were also ventilated to let out hot airt that had built up in the roof cavity providing a cooler more comfortable and healthier climate for the patients. Much the same concept is used for the hospital buildings, recreational buildings and ablution buildings. They all have the possibility for cross ventilation and have roof cavity ventilation. The same systems where used in the Gerardus-Majella leper asylum and the Bethesda Leper institution. The houses here also had a combination of cross ventilation through windows on both sides and also roof cavity ventilation in the patient houses.

## Conclusion

In order to answer the question "How does the design of Wesfort Leprosy Asylum of Wierda of Wesfort leprosy colony compare to its contemporary and to older leprosy institutions in

the Netherlands and its sphere of influence" it is necessary to look at the similarities between Wesfort and its contemporary institutions in the Netherlands and its Colonies. There are a lot of similarities between Wesfort and the Dutch Reformed mental institutions and colonial leprosy asylums that where build in the later 19th century in the Netherlands and Surinam. An important similarity between the design of these Dutch institution and Wesfort is the use of a special pavilion system to create a village like environment within the institutions. This was done to create a, both physically, as well as mentally healthy and natural environment for the patients. This village environment would be similar to how the patients would normally live. Within the institution a free standing "village" church would take a central position. Each patient group would have their own pavilion. The patient groups where separated according to sex and race in Wesfort and according to sex and social class in the Netherlands.

The concept of "bad air" that needed ample ventilation was also of great influence on all the institutions. This can be seen most clearly when Wesfort is compared to the Surinam Leper institutions. In both cases lots of attention went into providing a hygienic and well ventilated environment. This can be best illustrated with the open churches that where build both in Surinam in the Gerardus-Majella Leprosy asylum as well as in Wesfort.

In the end it can concluded that Wesfort was built within the same tradition as the institutions in the Netherland and Surinam from the same period. The Reformed Church closed institutions in the Netherlands with their village system probably had direct influence on the layout of Wesfort and also on the Leper institutions in Surinam. The great similarities between Wesfort and the Surinam institutions also indicate that they were built in the same tradition that was brought over from the Netherlands. This tradition highly valued hygiene and the moral treatment of patients.

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