

Designing the New Land

A historical look into the design of the Noordoostpolder.

Fabian Schwegman

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Supporting teacher: Jean-Paul Baeten

Abstract | The design of the Noordoostpolder not only included the placement of the villages, trees farms and land lots, but the social structures were also drawn out into detail. A strict selection was applied for those who wanted to have a chance of getting a farm. But did these two different factors – selection and architectural design – relate to each other in any way? Architecture always has a social aspect to it, since designs are made for the people. Social interactions were already studied in the 1930s as the Noordoostpolder is being developed, but did they influence the architecture in any way? Things were adjusted to make the designs of each design aspect more suitable for the new inhabitants. These things included more leisure space in greenery around villages, a design for Kraggenburg which was solely formed by social layers in the community and changes in the floorplans of the farmhouses to accommodate for the function of a farm. These changes were broad, however, and not adjusted to specific parameters that would follow from the selection. This was a very difficult task to achieve, due to the varying characters within the selection, the resistance by the Direction itself and the lack of knowledge about the candidates at the time of the design phase.

Keywords | Noordoostpolder, urban design, architecture, sociography, Granpré Molière, Pieter Verhagen, Henri ter Veen, Piet Dingemans, Kraggenburg.

1. Introduction

Mud, dirt, and wet clay as far as the eye could see. It must have been a surreal sight for the group of people that would decide the future of the Noordoostpolder, standing on the dike that separated the new IJsselmeer and this fresh stretch of land. The group of social planners, Henri ter Veen, Bram Lindenbergh, Sikke Smedings. Or what to think of the architects, Granpré Molière, Pieter Verhagen or any of the other numerous architects that designed the houses, towns, greenery, canals and roads which would turn this bit of mud into a liveable environment? Did they all have their own plan, trying to put their own theories into practice? Or did they coordinate, create a design based on the people that would get to live there and vice versa?

Was there a relationship between the design of the Noordoostpolder and the selection of its inhabitants?

Numerous research has been done on the topics separately. For example Eva Vriend, author of the book *Het Nieuwe Land*, went into depth on the selection of the inhabitants. Lead architects such as Molière and Verhagen have also been thoroughly researched by others, such as in Marinke Steenhuizen's book *Stedenbouw in het landschap, Pieter Verhagen (1882 – 1950)*. Yet these two subjects of architecture and the selection have not been thoroughly explored together: was there an influence on the design of the built environment based on the selection? In this thesis an attempt is

made at summarising both sides and comparing them, in an attempt to find similarities and connections which could answer the research question.

The research will be mainly done by a literature study of existing written material. Firstly, sources are gathered from research done on informative websites such as *canonnoordoostpolder.nl*, *flevolandsgeheugen.nl* and *Emmeloord.info*. These sites are not directly quoted but used as a source of sources. Then, non-fictional publications as well as biographical sources are studied to gather information on the topics. Lastly, but most importantly, architectural publications and magazines will be consulted by visiting the archive of *Het Nieuwe Instituut* in Rotterdam.

In this thesis, we will briefly explain the context of the developments in the Zuiderzee in the 20th century in the first chapter. Then the analysis will focus on the selection criteria for the Noordoostpolder, going into the general idea created by H. ter Veen, down to the implementation by Lindenberg. The second chapter will explore the theory and practice behind the urban plans of the Noordoostpolder. The town plan, allotment plan and landscape plan are all subjects that will be explored. The final chapter will dive deeper into the architecture of individual towns and houses, to get an idea of the ideologies and design strategies that have been applied. In the conclusion, the different chapters will be compared in order to find an answer to the research question.

2. The selection

How it began

The year is 1916, a large storm just hit the Netherlands and caused major floodings and even casualties in the Zuiderzee-region.¹ Until then, opponents of the Zuiderzee law, which would allow the largest reclamation project in the world to proceed, had the upper hand. But the storm silenced the last opposition, and soon the law was signed: Cornelis Lely's life's work would finally become reality.² After the creation of the test polder Andijk and a test dike near Wieringen, the Afsluitdijk was finally created, with the Wieringermeerpolder being reclaimed soon after.

Following the developments of the social structures of the Wieringermeerpolders closely was Henri Nicolaas ter Veen, Professor in social and economic geography. Ter Veen had a special interest in the social aspect of colonisation, as his promotion on the subject of the colonisation of the Haarlemmermeerpolder showed. He dreamed of a society free to be moulded into a desired shape, a sociographical subject called Eugenics.³ He recognised the first pioneers in a polder having "*confidence, ambition, industriousness, endurance, strong vitality and rational psychological characteristics*"⁴, with the people living in the polder creating a strong bond due to the common goal of survival in the harsh conditions, despite their differences⁴

But ter Veen also recognised the risks of uncontrolled colonisation, with the example of the Haarlemmermeerpolder. Here, the government had no clear plan in the distribution of the land and opted to selling to the highest bidder, resulting in a chaotic starting period with very low economic standards and many casualties. The result however was a "natural" selection in the strongest souls, leaving a close and vital community.⁵ Ter Veen wanted to prevent this initial period of chaos by selecting the strongest individuals from the start, and create an ideal society which would prosper without needing help from the government or other external factors.⁴

¹ Langenhuysen, H., & Langenhuysen, J. (1916). *Verslag over den stormvloed van 13-14 Januari 1916*. The Hague: Rijkswaterstaat.

² Hakkenes, E. (2017). *Polderkoorts: Hoe de Zuiderzee verdween*. Amsterdam: Thomas Rap.

³ van der Tuin, J. (2021, april 12). *Henri Nicolaas ter Veen: Waterschrijver*. Opgehaald van Flevolands geheugen: <https://www.flevolandsgeheugen.nl/page/10679/henri-nicolaas-ter-vee>

⁴ ter Veen, H. N. (1941). De Kolonisatiepolitiek In Den Noordoostpolder. *Mens en Maatschappij*, 353-378.

⁵ ter Veen, H. (1925). *De Haarlemmermeer als kolonisatiegebied: proeve eener sociaal-geographische monographie*. Groningen: onb.

The question was, however, what is the best composition for a vital society? Ter Veen was tasked with the job to create a theoretical guideline for this, together with Sjoerd Groenman and Evert Willem Hofstee. Based on scientific research, research into the past and the surroundings of the new polders they laid the foundation for a selection of potential tenants of the new land.⁶

The theory

The criteria ter Veen and his team came up with for future tenants was based on a variety of research. The Wieringermeer was taken as an example by looking at the pros and cons of the colonisation method applied by the government. There, the primary selection was mainly done based on the economic independence of specific farmers. Thereafter, the government tried patching the community together using a couple of methods: creating various kind of associations, preventing the founding of sectarian schools for as long as possible and organising gatherings for the community. This method of “arranging” a society was deemed undesirable by ter Veen, since it was not effective enough in his eyes. Therefore, in the selection for the Noordoostpolder not only economic, but also social aspects should be taken into account.⁴

Furthermore, commissions were asked to research the connection between the new land and the neighbouring provinces of Friesland and Overijssel, that were likely to provide the biggest number of candidates. Especially the Friesian researchers had a very specific idea about the necessary approach for the colonisation. Since they were the neighbouring province, with a lot of expertise on agriculture and cattle breeding and they were likely to provide the biggest percentage of future farmers, they promoted the idea of recreating their home province on the new land. In this way, the Friesian farmers would immediately feel at home, and a new community would not have to be developed, since it was simply an existing community being moved: *“It is desirable to bring the landscape in line with the nature of the inhabitants”*.⁷ Ter Veen was very much opposed to this idea. He was afraid that moving the existing communities would create a segregation in the society and hinder the development of a uniform polder nationality. He was not afraid that the different origins of the farmers would create a split in the society, since he saw in the Haarlemmermeer the common goal of survival on a new land already created enough of an incentive for community growth.⁸

Based on this, ter Veen recommended the following criteria for the selection:

1. The biggest goal of the new land must be always be recognised: benefitting the old land in the long run;
2. A solid economic basis should be the first priority;
3. As well as more social mobility compared to the Wieringermeer;
4. The selection should however not only focus on big financially independent farmers, but should incorporate sufficient small, “brave” farmers for a varying society;
5. Plenty of financial reserves should be prepared to survive the initial 25 years;
6. Avoid the colonisation of groups, individual colonists are preferred;
7. Married couples and young people should get preference, as well as general competence, good health and character;
8. A commission of professionals should advice the government;
9. Once 60% of the ground has been issued, a municipality should be founded.⁸

⁶ Vriend, E. (2012). *Het Nieuwe Land: het verhaal van een polder die perfect moest zijn*. Amsterdam: Balans, 51-53

⁷ de Groot, H. (1941). Rapport over de te verwachten betrekkingen tusschen Frieskand en den Noard-Oost polder. Leeuwarden: gemeente Friesland.

⁸ ter Veen, H. N. (1941). De Kolonisatiepolitiek In Den Noordoostpolder. Mens en Maatschappij, 353-378

Some of these points are very clear and logical, others leave room for interpretation. A “good character” is not something which can be determined by a simple list of questions or an interview, but will need the estimation of a likeminded group of people, or one person with a very clear idea of the future community of the Noordoostpolder (NOP from now on): Bram Lindenbergh.

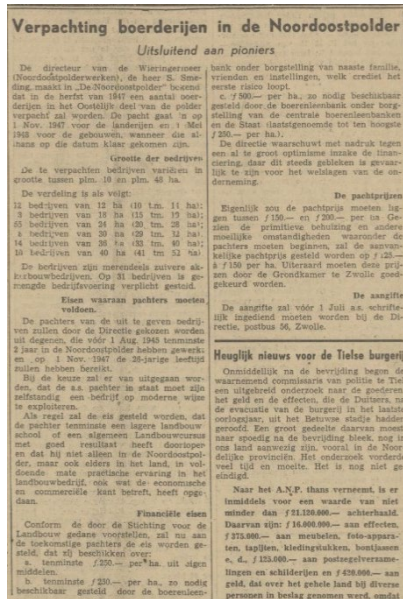


Figure 1: release article in the Friesian Newspaper, 17th of June 1947.⁹

bank onder borgstelling van naaste familie, vrienden en instellingen, welke crediet het reuze risico loopt.

The God of the Golden Tower

Lindenbergh was assigned with the massive task to select all the initial inhabitants for the NOP. Thousands of applicants selected by hand, interviewed and visited before they would get the unlikely pass. Bit by bit, the government released the land lots, varying in size from 10 to 48 hectares. Via articles in local newspapers the release was announced, specifying the requirements as:

- 2 years of experience with work in the NOP
- 26 years of age
- Independent and modern exploitation
- a general degree in agriculture
- a financially solid basis, specified in the article⁹

After the second world war was over, a last criterion was added to the selection: The applicant should not have been “wrong” in the war. Not only people who were convicted of war crimes, also former members of the NSB were rejected.¹⁰

The first 100 land lots were released in 1947. To make a selection out of the 45.000 applications for the land lots,¹¹ Lindenbergh and his department had to be strict. Technically, most of the thousands of applicants fulfilled the general specifications, yet their character was not deemed suitable for the creation of a strong community. Lindenbergh strictly selected on vital, strong and ambitious people, with a feel for modern farming. They also needed to participate in their local associations or councils, do some sort of board activities and be good citizens in more than just doing the job.¹² After the first selection, Lindenbergh and his team would start checking the backgrounds of applicants and paying them an unexpected visit, to double check their earlier findings. But even after a positive outcome, Lindenbergh was the *god of the golden tower*, the godfather with the final word. For most of the rejected applicants, the reasoning is still not fully clear since documents had to be deleted due to privacy reasons. Generally however, most of the “unsuitable” candidates were resigned based on their lack of participation in social activities or lack of social life.¹²

Conclusions

The selection of inhabitants was largely in hand of a couple of people with a strong vision. The basis of the theory was provided by Henri Nicolaas ter Veen, in which he argued the strongest communities would arise not only from a financially stable background, but also a resilient, strong and ambitious character. This theory was put in practice by Bram Lindenbergh. In the ads put out by his team, they made a primary selection based on age, marital status and financial strength. But this was not the only thing which they focused on. People were judged on their character, social capacity and engagement in the community as well, to ensure participation in the creation of the new society in the NOP.

⁹ Verpachting boerderijen in de Noordoostpolder; alleen aan pioniers. (1947, Juni 17). Friesch Dagblad, p. 1.
¹⁰ Vriend, E. (2012). *Het Nieuwe Land: het verhaal van een polder die perfect moest zijn*. Amsterdam: Balans. P. 124
¹¹ Alberts, E., & Xhofleer, M. (sd). *Uitverkoren of afgewezen? Eugenetische selectie in de Noordoostpolder 1940-1960*. Opgehaald van DisPlace: <https://www.displace.nl/page/834/uitverkoren-of-afgewezen>
¹² Vriend, E. (2012). *Het Nieuwe Land: het verhaal van een polder die perfect moest zijn*. Amsterdam: Balans.

3. The Planning of the Flat Land

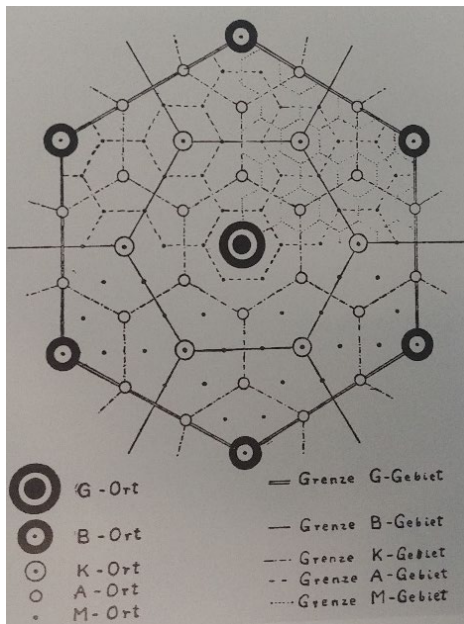


Figure 2: Diagram of Central Place Theory.¹³

How to design a completely new piece of land, only existing of stinky, sticky, heavy clay and some pioneering vegetation? Do you follow previous designs, which have been proven for many years and of which the pros and cons are known? Or do you apply the newest trends, out-of-the-box ideas that promise to solve all the issues and ensure a flourishing future, in theory? *What defined the urban design of the Noordoostpolder?*

A theoretical approach

Even though the earlier Wieringermeerpolder was considered a success in general, plenty of things could be improved about the design. For example, the villages needed to be of sufficient size to provide for the area, and they should be located as close to each other as to the new land to ensure a better integration with the old.¹³ To help the designing process, a theoretical basis was required for the planning of the newest land. Christaller's Central Place Theory, which was a result of research done in the south of Germany, was a fitting solution

for this. Christaller's theory explained a town's existence due to the surrounding area it services, the traveling distance and the type of services it provides. Inhabitants must travel for resources and services on their own costs, so the closer they can get these, the better. Some resources or services have a higher frequency of use than others, which will determine how far apart they are spaced. A place for groceries for example will have to be located closest to the inhabitants, and can only service a limited area, while cinemas are not used as frequently and can be further spaced apart. This balance between travel time, costs and supply and demand causes shops and houses to cluster, creating bigger or smaller towns depending on the available services and the area they have to provide. When taking equal traveling distances between towns into account, a hexagonal shape naturally emerges. (See figure 2).¹⁴

However, this theory was not the most important factor of the design of the NOP. Due to the crisis caused by a recession in the 30s and the Second World War, economic stability and production of food was the number 1 priority for the new land. Therefore, the Direction of the Wieringermeer, the governing body responsible for the exploitation of the polders, laid the emphasis on the allotment. The Direction wanted to extract the riches of the land as soon as possible, and not waste time on the planning and architectural aesthetics.¹⁵

Towns and Green Dresses

The Direction of the Wieringermeer started with the creation of the allotment plan in 1927, taking matters in their own hands. This leading role by the government, called the Welfare State, was typical for the time. The Dutch association of Architects (BNA) feared a very one dimensional, functional design with minimal architectural value with this approach, and voiced their critiques.¹⁶ However, the Direction was very stubborn in their plan, not wanting any influence from outside on

¹³ Woensel, J. v., & Flevoland, S. H. (1999). Nieuwe dorpen op nieuw land : inrichting van de dorpen in Wieringermeer, Noordoostpolder, Oostelijk en Zuidelijk Flevoland. Lelystad: Sociaal Historisch Centrum voor Flevoland, Stichting Uitgeverij de Twaalfde Provincie.

¹⁴ Woensel, J. v., & Flevoland, S. H. (1999). Nieuwe dorpen op nieuw land : inrichting van de dorpen in Wieringermeer, Noordoostpolder, Oostelijk en Zuidelijk Flevoland. Lelystad: Sociaal Historisch Centrum voor Flevoland, Stichting Uitgeverij de Twaalfde Provincie

¹⁵ Geurts, A., & Flevoland, S. H. (1997). *De 'groene' IJsselmeerpolders : inrichting van het landschap in Wieringermeer, Noordoostpolder, Oostelijk en Zuidelijk Flevoland* (66 ed.). Lelystad: Stichting Uitgeverij de Twaalfde Provincie. Retrieved from <https://zoeken.hetnieuweinstituut.nl/nl/publicaties/detail?q=Molier+Verhagen+Noordoostpolder&page=2>

¹⁶ Steenhuizen, M. (2007). *Stedenbouw in het Landschap. Pieter Verhagen (1882-1950)*. Groningen: nai010 uitgevers.

the planning process of the polder, in fear of unnecessary delays. Master Builder van Eck even said about the architects from the BNA: *“They will make the necessary mistakes in the buildings, as long as the facades are appealing enough.”*¹⁵ But after a long debate, the Direction finally conceded and founded the Construction Department. Consisting of advising architects Molière and Verhagen, sociographs Hofstee, Groenman and Takes, hydraulic engineers and landscape architects, they were tasked with designing the NOP. Plans for the villages’ locations, outlines of the villages, farms, houses and greenery were all within their responsibility.¹⁵ The addition of sociographs to the team meant the social aspect would become more prevalent in the designs, and the integration of the future candidates would go more smoothly. This was not only done because of pressure from the urbanists of the BNA, but was already considered necessary by the Direction due to the experiences they gained from Wieringermeer.¹⁴

Using the theory of Christaller, a plan with 10 villages around a central town was designed. A cross of roads divided the polder into four sections, with larger farms located in the middle of the polder, and smaller farms on the borders due to logistical reasons. Each village would have a service area of about 5000-7000 hectares. This size required a town of around 3000 people for a healthy community.¹⁵ Initially, various small hamlets would be scattered around the villages to provide homes for the workers nearby their farms. Molière wanted to reinstate the loosened traditional relationship between workers and farmers in this way. Sociographs Hofstee and Groenman argued that this idea was outdated and that the workers would be far better suited to live in the villages, giving the villages better vitality in the process. The compromise was to create a set of 4 houses for the chief worker next to the farms, with the other workers living in a village nearby.¹⁵

As mentioned before, there was a lot of critique coming from the BNA on the urban plan. Generally there were two minds about the planning of the polder: on the one side, the Direction of the Wieringermeer with Molière and Verhagen were creating a purely functional landscape, a farmscape; On the other side, architects from the BNA like Dudok and van Eesteren pleaded for an organic, Arcadian landscape on the level of 18th century England in a modern environment, to provide plenty of leisure space for the inhabitants alongside the functional spaces. They wanted to grab this unique opportunity to try something new, experiment on old theories in a new daylight, or new theories entirely.¹⁷

Even though the Construction Department was stubborn in their approach, slight adjustments were made to the plans before it was accepted in 1946, leaving more space for green and entertainment. The outlines of the first five towns would be created by the Construction Department and would have the following requirements: To create a healthy community, every town would be provided with a church from each pillar in the society. The core of the town would comprise of the churches, schools and town hall, around which the houses would be situated. Furthermore, on the north side of each town a small forest would provide both leisure space and shelter from the openness of the landscape. On the opposite side, the transition between the countryside and the town would have to be softened by an array of houses with larger gardens. With this the bigger spacing and extra greenery would create a subtle transition from town to countryside. This openness was crucial for the penetration of the countryside into the villages, since the people should not lose the connection with the environment they lived in. However, there should also be a certain compactness in the villages core, to provide shelter and be financially more viable. The sociographs lobbied for small, compact villages. This would enhance the community feeling, and at the same time maintain a connection between farmland and village.¹⁸

¹⁷ Steenhuizen, M. (2007). *Stedenbouw in het Landschap*. Pieter Verhagen (1882-1950). Groningen: nai010 uitgevers.

¹⁸ Geurts, A., & Flevoland, S. H. (1997). *De 'groene' IJsselmeerpolders : inrichting van het landschap in Wieringermeer, Noordoostpolder, Oostelijk en Zuidelijk Flevoland* (66 ed.). Lelystad: Stichting Uitgeverij de Twaalfde Provincie

With the plan for the villages settled, it was now time for the “dressing” of the plan: the greenery. Due to their earlier involvement in the design process, architects Bijhouwer, Pouderoyen and Brandts Buys were invited to propose a design for the landscaping. Landscaping architecture was however not rated very highly by the Direction of the Wieringermeer.¹⁸ This meant that it was more of a later addition than a part of the development from the start, to the annoyance of architect van Eesteren, who repeated his critiques. Project leader van Eck was stubborn as ever and stuck to his method of dressing up the plan in greenery after the majority of the plan was finished.¹⁸ For the final stage in 1947, Verhagen was asked to modify the earlier proposal. The general goal of the landscaping was to break the view of the wide-open landscape. Verhagen modified the greenery in such a way, that the directed view by the trees would both give scale and plasticity to the land. In his view, “*greenery gives the plasticity without which the landscape would just be a horizon, the space would be merely empty.*”¹⁷ In earlier plans there had not been much space for forests, since the expensive ground should be used for farmland wherever possible. This was revised, and forests were planned on the east side of the polder where the ground quality was not good enough for farming.¹⁸

Ideally, Verhagen and Molière wanted to involve the farmer into the design of the greenery, since the farmer created the land, modified the land, but at the same time the landscape created him. It was more than just the result of work.¹⁷ Molière was impressed by the farmers view on the beauty of his land. “*He puts on his best suit on Sunday to view his own land, to see how neatly the ground has been sown and cultivated. The pride of what is his, his care and his future.*”¹⁹ However, there were multiple limitations to this. First and foremost: there were no farmers yet. The selection had yet to be started. Secondly, there was not one type of farmer. People from all over the country would pioneer the new land, who would all have their own preferences and ideas. Another problem was the speed at which the realisation had to take place. The Direction was in a hurry and preferred to take matters in their own hands rather than have complicated and lengthy discussions with participating farmers. Lastly, little was known about the social structures at the time. Some research was done by ter Veen, but it was limited.²⁰

Conclusions

The planning of the NOP was influenced by social studies in some areas. The theory of Christaller was a connection between social behaviour and urban morphology. The outlines of the towns structure were based on enhancing community feel and reminding inhabitants of the connection with the functionality of the land. The landscaping also left space for leisure for the future inhabitants. These were all social aspects that were considered. However, the theory and planning of the NOP were not directly based on the future inhabitants specifically. Verhagen and Molière showed to have an intent to involve farmers in the design process, but this appeared to be more difficult than it seemed. Namely because of the speed of development, the melting pot of characters from all over the country and the slight resistance coming from the Direction itself. But most importantly, it would still take a couple of years until the inhabitants were to be selected. Therefore, it was difficult to establish a specific profile for the candidates, on which to base the design.

4. From Plan to Design

Zooming in on our research, the final step is the architectural designs of the individual towns, houses and farms. What were the architectural ideas behind the designs, was it in any way based on the social selection of the inhabitants? *What defined the architecture of the NOP?*

Now that the framework for the NOP had been accepted around 1947, and the lots were starting to get released, it was time the planned villages would become reality. Firstly, 5 villages would be developed under the direction of the Construction Department: Emmeloord, Marknesse, Ens,

¹⁹ Molière, G. (1955). Het landschap in de Noordoostpolder. *Forum Maandblad*, 7-10.

²⁰ Steenhuizen, M. (2007). *Stedenbouw in het Landschap*. Pieter Verhagen (1882-1950). Groningen: nai010 uitgevers.

Luttelgeest, Bant and Creil.²¹ Using the framework that was established earlier, the villages would be adjusted to the allotment plan by architects such as Pouderoyen, Wieger Bruin and Verhagen.²² The plans did not include adjustments to specific social specifications of the inhabitants however. This was quite difficult because the Direction did not assign candidates to each village based on character, but on their expertise.²³

Kraggenburg

Kraggenburg, Rutten, Espel, Nagele and Tollebeek were planned to be further developed by private architects, chosen by the Direction. The first architect to be selected for this was Piet Dingemans, his submission for an architectural contest being the main reason. As an architect, Dingemans had his focus more on the social aspects than the visible architecture. He started his design process for Kraggenburg from the ground up, creating a theoretical basis for the town, which could be reused in other contexts. His goal was to create a strong, social connection within the town.²¹

Dingemans' ideology focused on the social interactions between different classes in society. He divided the functions of a society in three clusters, subdivided in classes which were ordered based on their importance in his opinion. The three clusters comprised of: living, representing the relationship between people individually; production and trading, representing the relationship between people and goods; science and culture, representing the relationship between human and mind. With the different classes within each group melted together, this would form a base for the layout of any town.²⁴

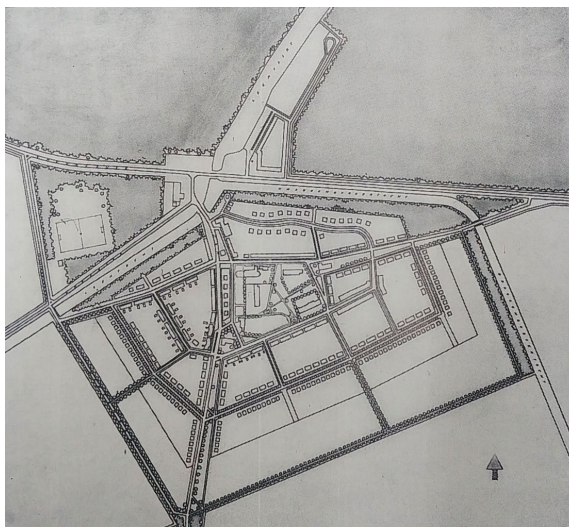


Figure 3: Urban design Kraggenburg, 1948.²⁴

With this social theory as a basis, Dingemans shaped the town in a way that was different than had been done until then. He positioned all the important buildings, such as schools, churches and the townhall in the centre of the town, all on the same, large square. This was done to prevent segregation within the town based on religious grounds. Dingemans thought the connection for children with the religion very important, and therefore placed them all together next to the church. Furthermore, the lowest (working) class of citizen, in Dingemans eyes, would be positioned on the outer ring of houses. Different than in previous towns, he also created a strong border around the town using water and green, to provide shelter and keep the town compact.²⁴

The for the time daring composition with the clustered churches and schools was critiqued by Molière. In his view, placing the churches together would emphasize the differences between them, and create a division instead of preventing it. Bijhouwer also feared the inhabitants would revolt. Sociograph Hofstee did not agree with Dingemans ranking of citizens, as he saw the working class as the most important class in the NOP. Support for the plan came from Verhagen. He understood the critique of his colleagues, but appreciated the theoretical approach that Dingemans used. Also,

²¹ Woensel, J. v., & Flevoland, S. H. (1999). *Nieuwe dorpen op nieuw land : inrichting van de dorpen in Wieringermeer, Noordoostpolder, Oostelijk en Zuidelijk Flevoland*. Lelystad: Sociaal Historisch Centrum voor Flevoland, Stichting Uitgeverij de Twaalfde Provincie

²² Bruggenkamp, J. W. (1994). Emmeloord, traditie en vernieuwing. In *Monumentenzorg, Jaarboek Monumentenzorg 1994: Monumenten van een nieuwe tijd. Architectuur en stedenbouw 1850-1940* (pp. 74-91). Monumentenzorg.

²³ Vriend, E. (2012). *Het Nieuwe Land: het verhaal van een polder die perfect moest zijn*. Amsterdam: Balans.

²⁴ Woensel, J. v., & Flevoland, S. H. (1999). *Nieuwe dorpen op nieuw land : inrichting van de dorpen in Wieringermeer, Noordoostpolder, Oostelijk en Zuidelijk Flevoland*. Lelystad: Sociaal Historisch Centrum voor Flevoland, Stichting Uitgeverij de Twaalfde Provincie

Smeding, overseer of the entire operation, thought it to be wise to experiment with at least one village using his theory. Eventually after some minor changes, the plan was approved, keeping the strong borders and central square.²⁴

The wonders of prefab construction

Apart from the towns, designs were needed for the individual houses as well. To keep costs low and development speed high, the Direction of the Wieringermeer decided to take both the designing and building of the farms and houses upon themselves.²⁵ The designs and development of these post-war farms were led by project manager Andries Dirk van Eck. To come up with a suitable design, van Eck did extensive research into the history of farms in the Netherlands. This research showed him however that it was undesirable to investigate the past for designing the new farms, since there were too many variations based on local traditions and functionality.²⁵

Instead, it was better to look to the future, what would be the most functional solution with the unique conditions of the new polder. Since building materials and manpower were rare in this post-war era, it was unreasonable to expect all farms to be built traditionally, out of brick. New ideas were needed. Van Eck promoted the use of prefab constructions, using a new material called shock concrete. The ingredients for this were readily available, cheap, and easy to produce in large quantities.²⁶ Furthermore, it could be produced into prefabricated elements, which would largely enhance the building speed. A wooden structure would hold the large concrete elements together. With only a few designs, varying on function and size of the lot, construction speed should be a lot higher than with the traditional method.²⁷

Concerns about this new technique were expressed once more from Architects of the BNA. The single design for a large quantity of farms could cause a loss of aesthetical qualities in the buildings in their view. Van Eck understood their fears but urged them to join the development of prefab technology instead of fighting it, so they could modify the technique to their standards. In his words: *“Do not see it as something, that is a burden, but alleviates, not just alleviates, but expands, not just expands, but warms.”*²⁷

Nielsen and Spruit, the developing architects of the interior designs for the farmhouses, implemented other new design ideas in the floorplans.²⁸ Up until that point, the trend in housing was to separate each function in a different room. Having a separated kitchen, dining room, living room, guestroom, bathing room and sleeping rooms was common to have in a house in the 30s. Nielsen



Figure 4: mixed farm with house connected to the barn.³²

and Spruit decided to combine some functions and organise a more compact floorplan, by creating a dining kitchen (for both cooking and eating). This design change was made with the idea that the farmer could enjoy his lunch in the kitchen and wouldn't make a mess in the neat living room. This was a successful idea, according to a housing study done in 1964, but some of the housewives that participated did not enjoy having their husbands watch them cook. The researchers also concluded the

²⁵ Elpers, S. (2018). *Wederopbouw boerderijen, agrarisch erfgoed in de strijd over traditie en modernisering, 1940-1955*. Rotterdam: nai010 uitgevers.

²⁶ van Eck, A. (1948). Montagebouw in de Noordoostpolder. *BOUW: Centraal weekblad voor het bouwwezen*.

²⁷ van Eck, A. (1948). Montagebouw van landbouwschuren in de N.O.-polder. *Forum maandblad*, 254-259.

²⁸ Staal, A. (1955). In onze N.O.P.-jes. *Forum maandblad*, 33-36

design of the house was not very future proof, as it would the life of a young family very well, but would not be suitable anymore when the kids have grown up and moved out of the house.²⁹

Even though designs for the houses were largely the same, there were small variations between iterations. Also, the differences between the type of farm, being an agricultural business or a mixed farm, changed the interaction between house and barn. On an agricultural farmhouse and barn were separated, while a mixed farm with cattle would have a connection between house and barn, to provide quicker access to the barn for the farmer in case of need.³⁰ There were other differences, more optimal shading, better positioning towards a town or better soil. Even for these small differences, the Direction of the Wieringermeer took them into account, giving out the better farms to the more suitable candidates.³¹

Conclusions

In the design stage for Kraggenburg, architect Dingemans paid extra attention to social interactions within his future town. This was done by his own ideology instead of research into the future inhabitants of the town, as was also critiqued by architects from the Construction Department. Calling this a connection between the selection of the inhabitants and the architecture is therefore a little far-fetched.

For the design of individual houses, some preferences were considered with creating the interior layout. However, these preferences were also not purely based on the specific people that would come to live there, but more a general improvement of life for the functionality of the farm. This also shows by the lack of flexibility in the design for future changes in the structure of the family. Houses were not adjusted to the people that would come to live there. However, the more suitable people were given better farms, and in that sense did form a subtle connection between the architecture and the selection criteria.

5. Main conclusions

Was there a relationship between the design of the Noordoostpolder and the selection of its inhabitants? To answer this question, we looked at three different aspects: the selection criteria, the planning of the polder and the design of the towns and houses.

Using the theoretical basis of Henri ter Veen, Bram Lindenbergh made a strict selection in the thousands of candidates for the polder. Only the best, healthiest, ambitious, and modern farmers would initially get an invitation, but even that was not enough to ensure a location in the polder. People needed to be social, active in the community, since Lindenbergh and ter Veen found a strong community was only possible with people that would actively participate in it.

In the designing phase, not a lot of connections were showing between the selection and the architecture. Attempts were made to involve farmers in the design of the greenery, but this was deemed too time-consuming and complicated. The attitude of leading characters within the Direction of the Wieringermeer did not help with this either, as they did not think highly enough of the farmers to consider involving them.

Architect Dingemans tried to apply social theories as a baseline to his design for Kraggenburg. This in essence could have been the connection between the selection and architecture that we have been

²⁹ Barends, J., & Block, L. (1964). *De Bewoning van boerderij- en tuinderswoningen met eetkeuken in de noordoostpolder*. Wageningen: Instituut voor Landbouwhuishoudkundig Onderzoek

³⁰ Elpers, S. (2018). *Wederopbouw boerderijen, agrarisch erfgoed in de strijd over traditie en modernisering, 1940-1955*. Rotterdam: nai010 uitgevers.

³¹ Vriend, E. (2012). *Het Nieuwe Land: het verhaal van een polder die perfect moest zijn*. Amsterdam: Balans.

³² Woensel, J. v., & Flevoland, S. H. (1999). *Nieuwe dorpen op nieuw land : inrichting van de dorpen in Wieringermeer, Noordoostpolder, Oostelijk en Zuidelijk Flevoland*. Lelystad: Sociaal Historisch Centrum voor Flevoland, Stichting Uitgeverij de Twaalfde Provincie.

looking for. However, Dingemans based his theory not on research, but on personal interpretations and ideas. Therefore, farmers and workers were put lower on the social ladder in his design, while sociographs such as Hofstee and Groenman had the complete opposite mentality from the beginning: the land should be one for the worker, as it was the pure definition of functional land. Also, in the architecture of the individual farms and houses, not much was done to implement specific social characteristics of the candidates into the design of the houses. True, changes were made to make the houses more suitable for farmers, but this was done in a general, broad way across all the houses. The lack of variety in designs also supports this finding.

So, was there a relationship between the design of the Noordoostpolder and the selection of its inhabitants? No, specific attention was not given to the characteristics of the candidates in the design phase. Many reasons for this can be named: houses needed to be built fast and efficient, the lesser variation, the better; Candidates came from all over the country, with each their very specific demands and uses. Architects had to accommodate all of them, without exactly knowing who would get to live where; And furthermore, the design process hardly overlapped with the selection process, and was therefore difficult to integrate with each other. Attempts were made to implement social aspects, but they were based on the idea of the architect itself, and not on research done into the characteristics, even though that would have been very difficult to begin with in the first place.

Bibliografie

- Alberts, E., & Xhofleer, M. (sd). *Uitverkoren of afgewezen? Eugenetische selectie in de Noordoostpolder 1940-1960*. Opgehaald van DisPlace: <https://www.displace.nl/page/834/uitverkoren-of-afgewezen>
- Barends, J., & Block, L. (1964). *De Bewoning van boerderij- en tuinderswoningen met eetkeuken in de noordoostpolder*. Wageningen: Instituut voor Landbouwhuishoudkundig Onderzoek.
- Bruggenkamp, J. W. (1994). Emmeloord, traditie en vernieuwing. In *Monumentenzorg, Jaarboek Monumentenzorg 1994: Monumenten van een nieuwe tijd. Architectuur en stedenbouw 1850-1940* (pp. 74-91). Monumentenzorg.
- de Groot, H. (1941). *Rapport over de te verwachten betrekkingen tusschen Frieskand en den Noord-Oost polder*. Leeuwarden: gemeente Friesland.
- Elpers, S. (2018). *Wederopbouw boerderijen, agrarisch erfgoed in de strijd over traditie en modernisering, 1940-1955*. Rotterdam: nai010 uitgevers.
- Geurts, A., & Flevoland, S. H. (1997). *De 'groene' IJsselmeerpolders : inrichting van het landschap in Wieringermeer, Noordoostpolder, Oostelijk en Zuidelijk Flevoland* (66 ed.). Lelystad: Stichting Uitgeverij de Twaalfde Provincie. Opgehaald van <https://zoeken.hetnieuweinstituut.nl/nl/publicaties/detail?q=Moliere+Verhagen+Noordoost+polder&page=2>
- Hakkenes, E. (2017). *Polderkoorts: Hoe de Zuiderzee verdween*. Amsterdam: Thomas Rap.
- Langenhuysen, H., & Langenhuysen, J. (1916). *Verslag over den stormvloed van 13-14 Januari 1916*. The Hague: Rijkswaterstaat.
- Laotseuphilo. (2007, June 17). *K = 3 Principle*. Opgehaald van Wikipedia.org: https://en.wikipedia.org/wiki/Central_place_theory#/media/File:Christaller_model_1.svg
- Molière, G. (1955). Het landschap in de Noordoostpolder. *Forum Maandblad*, 7-10.
- Planning Tank. (2020, Augustus 12). *Christaller's Central Place Theory | Urban Geography & Economics*. Opgehaald van Planningtank: <https://planningtank.com/settlement-geography/central-place-theory>
- Staal, A. (1955). In onze N.O.P.-jes. *Forum maandblad*, 33-36.
- Steenhuizen, M. (2007). *Stedenbouw in het Landschap. Pieter Verhagen (1882-1950)*. Groningen: nai010 uitgevers.
- Stuvel, H. (1967). *Bouwen op nieuwe bodem: ten behoeve van de gemeenscjp in het voormalige zuiderzeebekken*. Assen: Van Gorcum, Prakke en Prakke.
- ter Veen, H. (1925). *De Haarlemmermeer als kolonisatiegebied: proeve eener sociaal-geographische monographie*. Groningen: onb.
- ter Veen, H. N. (1941). De Kolonisatiepolitiek In Den Noordoostpolder. *Mens en Maatschappij*, 353-378.
- Urk, A. v. (1989). *Daar werd een dijk gelegd*. Urk: Urker uitgaven.
- van der Tuin, J. (2021, april 12). *Henri Nicolaas ter Veen: Waterschrijver*. Opgehaald van Flevolands geheugen: <https://www.flevolandsgeheugen.nl/page/10679/henri-nicolaas-ter-veen>

van Eck, A. (1948). Montagebouw in de Noordoostpolder. *BOUW: Centraal weekblad voor het bouwwezen*.

van Eck, A. (1948). Montagebouw van landbouwschuren in de N.O.-polder. *Forum maandblad*, 254-259.

Verpachting boerderijen in de Noordoostpolder; alleen aan pioniers. (1947, Juni 17). *Friesch Dagblad*, p. 1.

Vriend, E. (2012). *Het Nieuwe Land: het verhaal van een polder die perfect moest zijn*. Amsterdam: Balans.

Woensel, J. v., & Flevoland, S. H. (1999). *Nieuwe dorpen op nieuw land : inrichting van de dorpen in Wieringermeer, Noordoostpolder, Oostelijk en Zuidelijk Flevoland*. Lelystad: Sociaal Historisch Centrum voor Flevoland, Stichting Uitgeverij de Twaalfde Provincie.