



Exploring the benefits of Nature-based Solutions and citizen involvement in Meerstad, Groningen (Netherlands)

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Abstract

As cities face ecological and social challenges in the 21st century, nature-based solutions have emerged as a collection of strategies to help remedy some of the issues caused by climate change and rapid urbanization. Some of these strategies include measures such as planting more trees in neighborhoods to help decrease local temperatures, implementing water-tolerant plants in waterways to improve water quality, constructing green roofs to support water retention and biodiversity, and restoring wetlands to prevent flooding in cities and absorb CO₂. Previous research demonstrates that nature-based solutions can provide benefits to areas that adopt them and improve natural qualities such as biodiversity and water quality. Despite the cited evidence, there remain some research gaps about their implementation, design, and their relationship to society. The purpose of this study is to examine an emerging neighborhood of the city of Groningen called Meerstad where nature-based solutions have been implemented by Bureau Meerstad the office in charge of the designs. The aim of the research is to find out how residents of Meerstad value nature-based solutions, their roles in the design process, and how inclusive the societal benefits of nature-based solutions are for Meerstad's residents. This was investigated using a Grounded Theory Mixed-Method approach utilizing surveys and in-depth interviews. An additional section regarding perceptions of greenspace in Berlin, Germany compares the findings from Meerstad within an international context. The results of the research show that in Meerstad there is a distinction between functional and natural values and residents value recreation and biodiversity highly. Investigations of citizen involvement in Meerstad found that overall residents were satisfied with their level of involvement, but by allowing residents to have a higher level of involvement, higher sustainability outcomes were achieved confirming the results of the literature. The main takeaway from the STOURIE project in Berlin was that residents there did not have the perception that flooding was a pressing threat compared to Meerstad where residents were aware of the danger posed by climate change in an area located below sea level. The nature-based solutions that provided the most benefits to residents were the lake and reeds. The benefits that these interventions provided were mostly environmental and not always immediately apparent such as creating habitats, improving water quality, and preventing flooding. Some unanticipated findings were that there is a connection between nature-based solutions and inequality as those who can afford to live where they are implemented gain the most benefits while lower-income residents lack accessibility.

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1. Introduction:

1.1 Background

As cities face increased ecological, social, and economic problems in the 21st century, they must contend with higher rates of urbanization and the effects of climate change such as flooding, increased temperatures, increased rainfall, and higher instances of storms (Gandini, et al., 2017). Nature-based solutions have emerged as a key strategy for cities to adapt to environmental stressors and increase urban resilience (Bush and Doyon, 2019). An example of their implementation is in Thessaloniki, Greece where the local landscape architecture school created urban gardens for residents, or in Lambhill Stables in Glasgow, Scotland where constructed wetlands were implemented to remediate an old mining site and create a new public green space (Frantzeskaki, 2019).

There has been a substantial degree of research into the environmental and technical benefits of nature-based solutions, while knowledge gaps have emerged on the social and societal aspects (Kabisch et al., 2016). According to Kabisch et al. (2016), there is a substantial knowledge gap regarding the relationship between society, stakeholder involvement, and the effects of human-nature relations on lifestyles, beliefs, and preferences. Kabisch raises questions about the place-based effects such as gentrification, displacement, and whether all residents benefit from nature-based solutions or a small segment of the population (Kabisch et al., 2016). The need for more research into these aspects is confirmed by the article from Medved (2017). The author describes two case-study neighborhoods, one that uses bottom-up methods while the other one uses primarily top-down methods, to reach sustainability goals. Despite different approaches, both cases equally fail to reach social goals of diversity of age, income, race, and culture (Medved, 2017). This leads to questions about who benefits from sustainability initiatives and what social effects they have on local communities. More research into these aspects would help give society a better understanding of the impact of nature on attitudes and beliefs of residents, the effects of gentrification and displacement and how inclusive nature-based solutions are for residents (Kabisch et al., 2016).

1.2 Research Problem

The aim of the research is to explore the effects of nature-based solutions in the area of Meerstad, Groningen with a comparison to an international case. The goal is to fill the research gaps proposed by Kabisch et al. such as the effectiveness of nature-based solutions, their relationship to society, design, and their implementation (Kabisch et al., 2016). The central question that emerges is:

1. *“How do residents’ value nature-based solutions in Meerstad Groningen?”*

The developers of the Meerstad Neighborhood incorporated elements of nature-based solutions into the design such as green roofs, lakes, and other blue-green infrastructure. The neighborhood

is still in the process of development and the is likely to change with new research and strategies. To address gaps such as design and implementation the second question becomes necessary:

2. *“What role has resident feedback had on the design and implementation of nature-based solutions in Meerstad?”*

The data collected from Meerstad was compared to data obtained from residents at two locations in Berlin, Germany. The first is an established neighborhood built around the Sponge city concept called Rummelsburg. The second is Volkspark Friedrichshain, a public greenspace in the city. The goal was to assess attitudes towards nature-based solutions and greenspace in an international setting. The third question connects the Berlin and Meerstad contexts:

3. *“How do attitudes on nature-based solutions from park users in Berlin compare to attitudes of residents in Meerstad, Groningen?”*

The fourth question looks into which specific nature-based solutions and their elements help and provide the most benefits for the residents of Meerstad:

4. *“Which nature-based solutions provide the most benefit to residents?”*

These questions form the basis of the interviews and surveys intended to find any overlap in attitudes and experiences.

1.3 Guiding structure

The thesis is structured around six main chapters containing the main themes, while subchapters are dedicated to exploring the data. Chapter 2 explores the background and main themes relevant to the research. Chapter 3 describes the research methods, including the interview process and process of survey data collection. Chapter 4 explores the survey results and answers the research questions. Chapter 5 summarizes the research conducted. Chapter 6 proposes recommendations for planners and stakeholders based on the results of the study and covers the strengths and weaknesses of the research project.

2. Theoretical framework

2.1 Nature-Based Solutions

The main concept whose effects are to be explored is nature-based solutions. Nature-based solutions are the implementation, maintenance, restoration, and enhancement of blue and green spaces to improve biodiversity and ecosystems (Kabisch et al., 2016). These solutions are designed, inspired and/or supported by nature to help with environmental challenges, but also have the additional goals of improving the economy, society, and local ecology (Frantzeskaki, 2019). Examples of the ecological and economic benefits of nature-based solutions are stormwater mitigation, biodiversity enhancement, and improving human well-being (Watkin et al., 2019). Despite the research done on nature-based solutions and their physical implementation, there are still knowledge gaps to be filled with regards to the societal aspects (Kabisch et al., 2016). An example of implementation is in Katowice, Poland where local riverbanks were restored to reestablish local habitats, aid in water retention, and to create a new space for residents (Frantzeskaki, 2019).

2.2 Sponge City

The Sponge City concept was pioneered by Chinese researchers and is based on the utilization of natural systems to deal with stormwater and water pollution (Qi et al., 2020). Some of the physical elements featured in the Sponge City approach are permeable pavements, green roofs, rainwater wetlands, water retention ponds, vegetation buffer zones and sunken greenspaces (Qi et al., 2020). The system works by building a water system that acts like a sponge, absorbing rainwater, allowing it to infiltrate the ground, reducing flooding and limiting the need for traditional drainage infrastructure (Feng and Yamamoto, 2020). This concept comes into play in Rummelsburg, Berlin which was built around this concept. Many elements from this concept appear under the term nature-based solutions in other projects. Elements of the Sponge City that are incorporated in the Meerstad plan are water retention areas, vegetation buffer zones, and natural filtration to improve water quality.

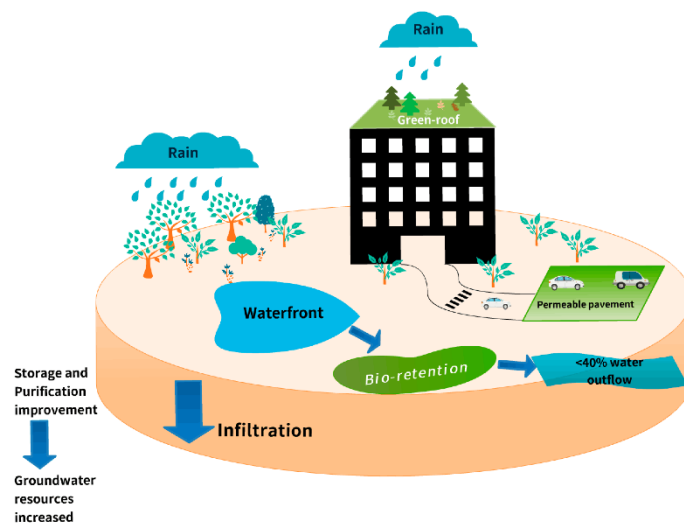


Figure 1: Example of Sponge City functioning (Qi et al., 2020).

2.3 Citizen involvement

Citizen involvement can be defined as citizen power, specifically the process of redistributing power allowing citizens to join in political and economic decision making (Arnstein, 1969). This concept is shown using Arnstein's ladder of citizen participation (Figure 2) which depicts the levels of engagement from non-participation to tokenism and citizen power (Arnstein, 1969). An example of non-participation is creating committees of citizens that have no real power. An example of citizen power is a delegate agency where citizens have seat majority and have dominant decision-making authority (Arnstein, 1969). This concept is relevant because the level of citizen participation can have a large impact on how and where nature-based solutions are implemented, possibly explaining the degree of accessibility for residents and who benefits from implemented measures (Frantzeskaki, 2019).

Citizen participation doesn't always lead to positive

sustainable outcomes due to structural conditions and a lack of support for developing effective collaboration processes which can lead to counterproductive outcomes (Wamsler et al., 2019). Alternatively, if these channels are properly developed using a more reflexive approach to governance, the social benefits of involvement can be strengthened even if sustainability outcomes are unclear (Kiss et al., 2022). Consulting professionals and citizen groups involved in the Meerstad project about the level of citizen involvement gives a richer view of the design process and the resulting social and sustainability outcomes. Livability of neighborhoods and accessibility of nature-based solutions connects to these outcomes when assessing the effects and perceptions of residents of Meerstad (Frantzeskaki, 2019).

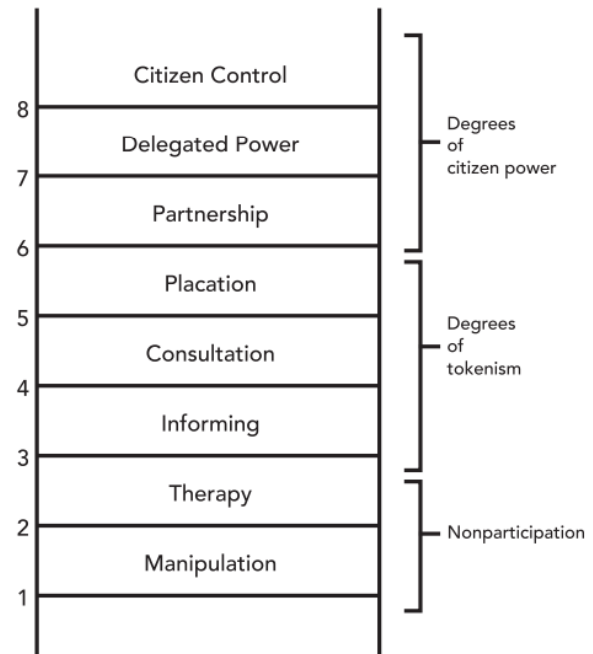


Figure 2: Arnstein's ladder of citizen participation (Arnstein, 1969).

2.4 Conceptual model

The conceptual model (Figure 3) shows how the concepts and theories illustrated in the theoretical framework interact in the context of Meerstad. The way residents use nature-based solutions influences how they value them and how their feedback influences the design process. The interactions between residents and planning professionals influences the decision making in the design process within Meerstad. The combination of feedback, perceptions, and uses shows how nature-based solutions are valued in each context. The users of greenspace in Berlin and their perceptions of nature-based solutions contextualize the findings on a wider international scale.

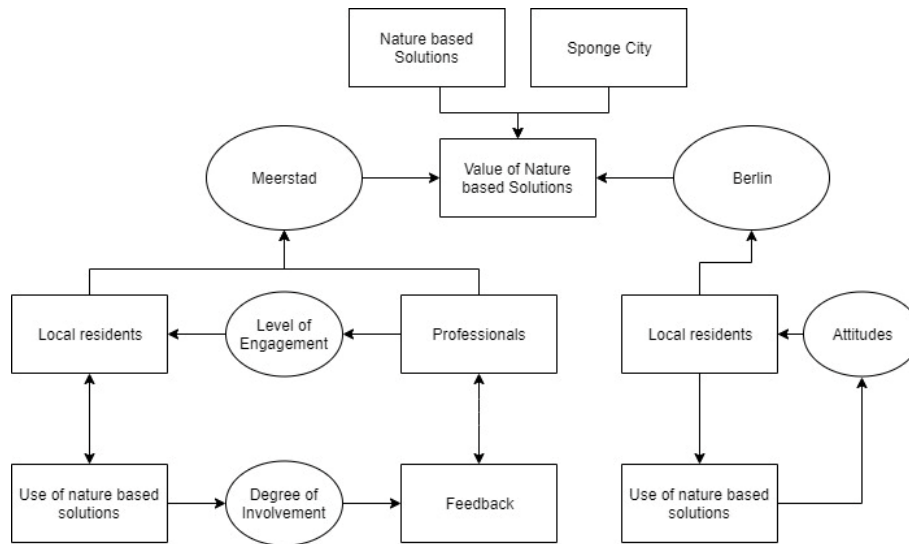


Figure 3: Conceptual model based on theoretical framework (Author 2022)

2.5 Expectations

As the research is utilizing a Mixed-Method approach with elements of Grounded Theory, the research is more in line with inductive reasoning (Guetterman, et al., 2017). In line with the qualitative side of mixed methods, there is a preliminary expectation. Based on the literature there is an expectation that citizen involvement will not improve sustainability outcomes from nature-based solutions but conducted at a deeper level it could help with social engagement (Kiss et al., 2022). Citizen involvement could possibly hinder sustainability outcomes and any positive outcomes from engagement might be unintended (Wamsler et al., 2019). Residents will most likely value nature-based solutions for their possible recreational benefits and the feedback of residents will not have a very strong effect on the design of nature-based solutions.

3. Methodology

3.1 Research area

The research area to be explored is the neighborhood of Meerstad in Groningen. Construction of the neighborhood began in 2005 around the concept of one-third nature, one-third water, and one-third housing (Over Meerstad - Meerstad, 2022). The current population of Meerstad is 2,025 people comprising 665 households (CBS in uw buurt, 2022). The structure of the neighborhood is predominantly households with children (64%) which is supported by the overall population breakdown where the dominant groups are people ages 25-45 (38%) and 0-15 (32%) (CBS in uw buurt, 2022). The neighborhood is

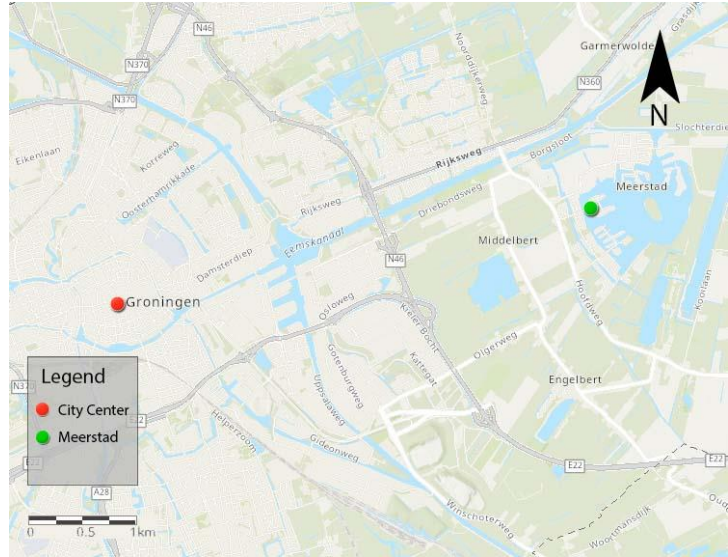


Figure 4: Map of Meerstad study location (Author 2022)

predominantly composed of single-family housing (97%) which is owner-occupied (90%) (CBS in uw buurt, 2022). Of the households recorded in Meerstad, 53% were high-income with only 2% having low purchasing power compared to the city center which has only 5% high income households and 83% of the total have low purchasing power (CBS in uw buurt, 2022). Currently there are no statistics available on the education levels in Meerstad. The map in figure 6 shows the currently built-up area, the eventual plans for expansion in the master plan and the section where the research is being conducted in bold.

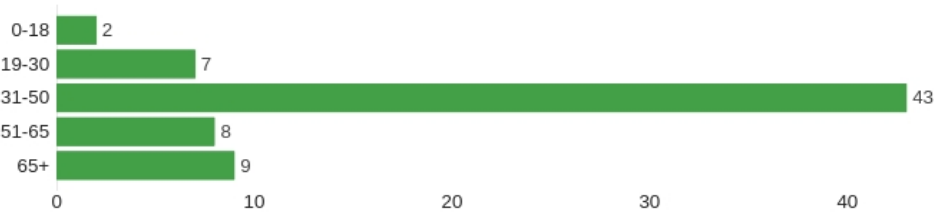


Figure 5: Age groups of Meerstad Citizens (Author 2022)

Meerstad Study Area

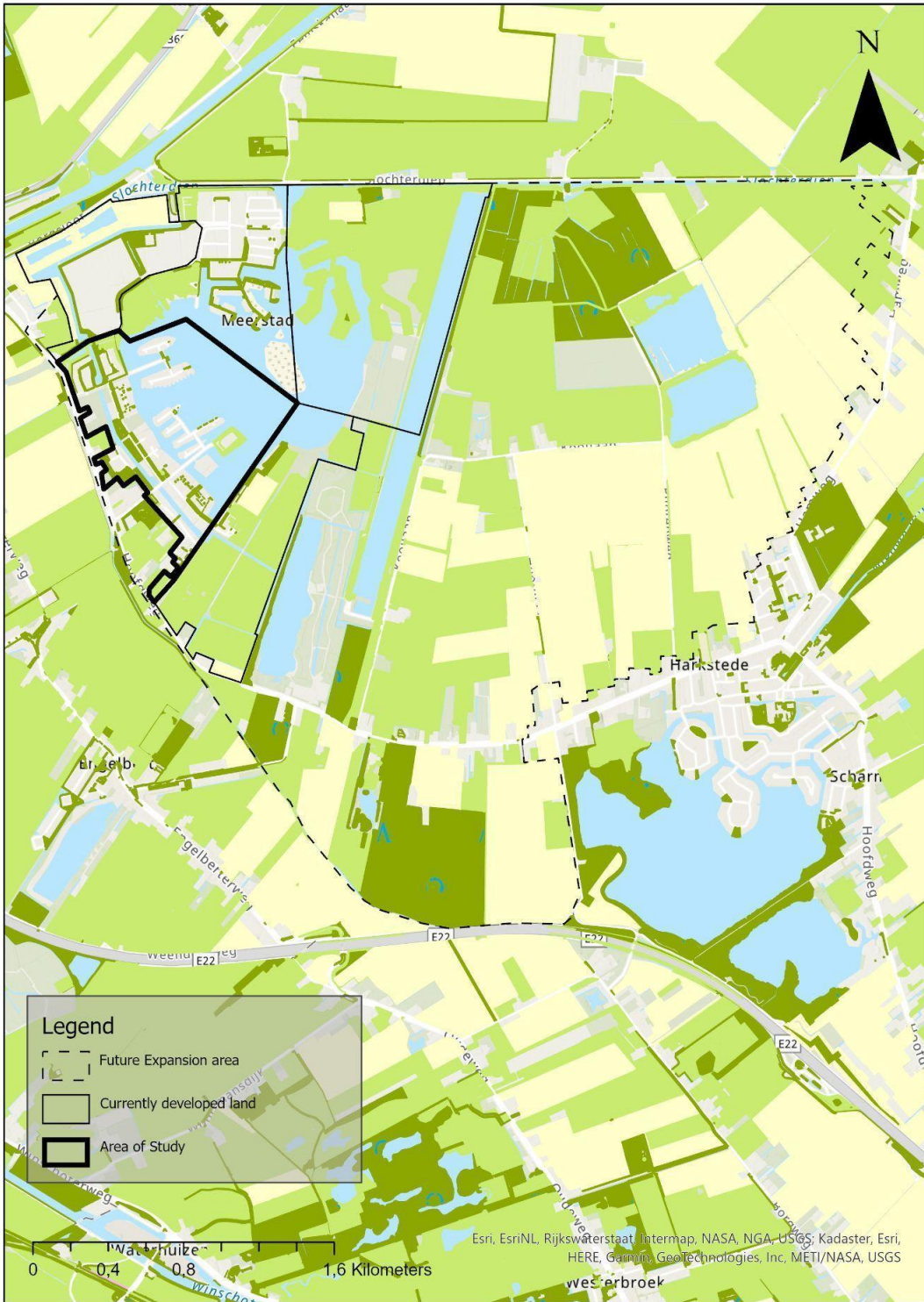


Figure 6: GIS Map of study area with greenspaces and water shown (Meerstad, Groningen)

3.2 Data collection strategy

As Meerstad is a new neighborhood still under construction with a relatively small population size and not much prior research, a mixed-method approach with elements of Grounded Theory (MM-GT) is appropriate (Guetterman, et al., 2017). This allows for a multi-faceted approach that shows the opinions of residents using statistics and fills any remaining gaps utilizing interviews with active professionals and neighborhood groups. There is relatively little research regarding the societal effects of nature-based solutions as it is still an emerging domain (Kabisch et al., 2016). As a field that needs key research gaps to be addressed, Grounded Theory can help create new theories and explanations for phenomena that have not been studied as intensively such as nature-based solutions in Meerstad (Guetterman, et al., 2017). The mixed-method section helps to build stronger inferences that would not be possible with just qualitative or quantitative data alone (Guetterman, et al., 2017).

3.3 Data collection

Data collection began by selecting an area of Meerstad to survey (Figure 6). Once the area was selected, questions were formulated with the help of statistical planning table (Appendix B). Then the survey (Appendix A) was created to help answer the research questions. The method of surveying was door-to-door starting from the lake and moving west towards Groningen. The study population is residents of Meerstad, based on CBS data, the most effective way to get a representative sample is to collect per household. The door-to-door method helps to gain an understanding of the local context and identify potential respondents for interviews. The resulting data was analyzed and used to help construct the interview guide (Appendix C). This iterative process is in line with the principles of Grounded Theory which is based on a close relationship between analysis and data collection (Guetterman, et al., 2017). Potential respondents were invited to take part in interviews (Appendix C). After each interview the results were analyzed and new questions were added to the original interview guides. Respondents interviewed included leaders of neighborhood groups, workers at Bureau Meerstad, landscape architects, and biologists. These interviews help to answer the first and second research questions while the third and fourth research questions were answered using surveys. To protect anonymity, improve clarity, and categorize the interviews, each interviewee is referred to by their profession. (Table 1) By collecting survey data and conducting interviews with professionals, a holistic view of the Meerstad project and its implementation is constructed.

Table 1: Interview respondents

Respondent	Profession	Relation to the Project or Responsibilities.
1.	Landscape Architect	Local Resident and designer of “reeds” nature-based solution
2.	Bureau Meerstad	Civil Engineer active in the project from the beginning stages
3.	Dorpsbelangen	Local resident & member of local citizen interest group
4.	Sponsland	Curator of Groningen Sponsland project
5.	The Biologist	Activist in local area, involved in nature conservation

3.4 Analysis

3.4.1 Quantitative

The method of data analysis for Meerstad was done by consolidating the surveys online using Qualtrics software. Once preliminary data was collected, the results of the survey were analyzed using descriptive statistics in SPSS to identify patterns in the responses of residents. The most prominent themes from the surveys informed new questions added to the original interview guides. Once the data collection was complete, the questions were turned into variables and statistical tests were run to help answer sub-questions 1 and 2.

Table 2: Overview statistical testing

Dependent variable	Independent variable	Statistical test	Null Hypothesis
Are you familiar with NBS?	To what extent has the municipality involved you in decision-making about Meerstad?	Mann-Whitney	In the population there is no relationship between the familiarity with nature-based solutions and the extent of involvement in decision making.
Are you familiar with NBS?	How happy are you with your level of involvement in decision-making?	Mann-Whitney	In the population there is no relationship between the familiarity with nature-based solutions and the level of involvement in decision making
Are you familiar with NBS?	How willing would you be to participate in design decisions?	Mann-Whitney	In the population there is no relationship between the familiarity with nature-based solutions and willingness to participate in design decisions.
Important to live near greenery?	Satisfaction - Greenspace	Spearman's rho	H0: $p = 0$

Important to live near greenery?	Satisfaction - Connection with nature	Spearman's rho	H0: $p = 0$
Important to live near greenery?	Satisfaction - Sustainability	Spearman's rho	H0: $p = 0$
Important to live near water?	Satisfaction - Access to water features	Spearman's rho	H0: $p = 0$
Important to live near water?	Satisfaction - Flood protection	Spearman's rho	H0: $p = 0$

3.4.2 Qualitative

The results of the surveys informed the questions asked of interview respondents. After every interview the transcripts were analyzed using the inductive code book (Appendix F). This codebook was continuously updated based on themes that arose after each interview. For example, relevant topics such as social access and education were identified in the analysis then added to the code book. The themes that help answer the research questions were identified and combined with the quantitative analysis to find the results.

3.5 Quality of data

The survey data can be considered representative of the households in Meerstad. There are 665 households, and 69 surveys were obtained surpassing the 10% threshold (CBS in uw buurt, 2022). The main purpose of the surveys was to gain an initial understanding of the problem and provide a basis for improved interview questions using Grounded Theory after analysis. The quality of the data obtained from the interviews is sufficient to improve interview questions and answer the research questions. The data was collected Monday to Friday between 13:00 and 17:30, possibly leading to less responses due to working hours, but alternative collection times were not feasible due to constraints such as mealtimes and child school preparations. Despite this, the research aims were met.

3.6 Ethical considerations

To protect respondents of the surveys and obtain objective results, a disclaimer and consent question was added to each survey in Dutch and German. Each survey was anonymous. During the interviews, each respondent was asked for permission to record the interview and afterwards the names of respondents were replaced with anonymous labels. Throughout the entire process of data collection, respondents were informed of the nature of research and any questions regarding the data were truthfully answered. Each respondent was presented with the option of withdrawing from the project at any time. The research followed the standards of scientific integrity set by the University of Groningen, based on the Netherlands Code of Conduct for Research Integrity (KNAW 2018).

4. Berlin, Germany

This component was part of the Sustainable Transformation of Urban Regions in Europe (STOURIE) program. This program was a blended mobility pilot project consisting of international lectures and a week of fieldwork in Berlin conducting research with students from Berlin, Stockholm, Groningen, and Milan.

4.1 Site Analysis

The first location, Volkspark Friedrichshain, was one of the first parks in Berlin and a meeting point for the city (Gardens, 2022). Volkspark is in Friedrichschain-Kreuzberg which has an average age of 38.2, classified as lower income as 22% of the inhabitants receive government support (Wilcoproject, 2022). The second area Rummelsburg, built in the 1990's for higher income groups, is located in Lichtenburg which has an average age of 42.4 (Statistik-Berlin, 2022). Rummelsburg was built with Sponge City concepts with park areas primarily used by residents. The waterfront has been also improved with reeds and nature areas for wildlife. Some examples of nature-based solutions implemented in Rummelsburg are bioswales, green roofs, and habitats for birds and wildlife.

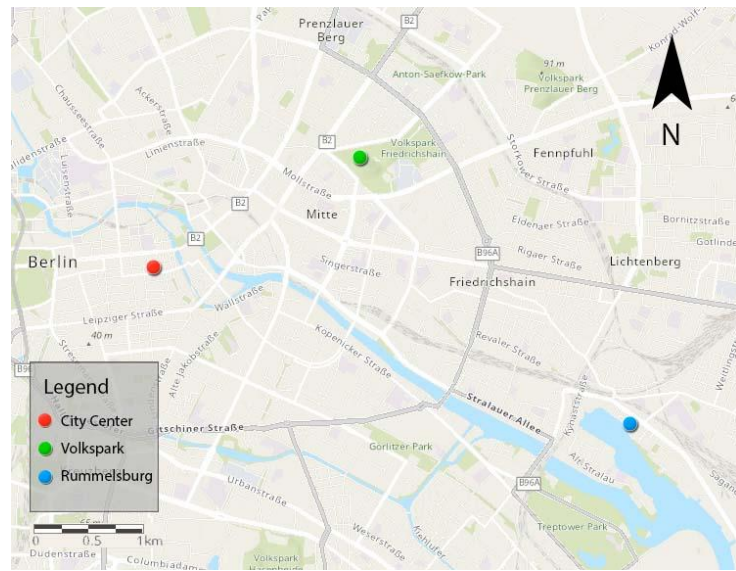


Figure 7: Map of Berlin study locations (Author 2022)

4.2 Methods

To answer the third research question based in Berlin, special considerations were taken. The method of data collection used in Berlin was surveys in both Rummelsburg and Volkspark. This differs from the Meerstad data collection as the goal was to approach individual users of the parks rather than households. This method was most fitting for the context as the research is targeted on nature-based solutions and greenspace rather than one residential area.

4.3 Relevance / Objective

The goal of the research in Berlin is to get a better understanding of how people perceive greenspaces and nature-based solutions internationally. The objective is to make a comparison between Berlin and Dutch context.

4.4 Limitations

Due to the international collaboration aspect of STOURIE, surveys were created by merging the research of group members. While this creates less targeted data regarding nature-based solutions, it highlights the concept in an international context and puts the findings in Meerstad into perspective. A time constraint of having only one week to collect data made interviews impractical. Despite this limitation, the results from Berlin provide a useful overview of the attitudes and perceptions of locals which builds a good comparison to Meerstad in Groningen.



Figure 8: Bioswale in Rummelsburg (Author 2022)

5. Findings:

This section describes the results of the study and analysis. The results are based on the data obtained from the surveys as well as the interviews. The chapter is divided into subsections that answer each research question. The results are structured in a way that extracts excerpts from the interview data then combines the qualitative data with the quantitative statistical data to show the situation from all perspectives. Throughout each section there are overlapping themes that appear in the data based on the interviews and surveys. Additionally, there is a dedicated section for the findings obtained from Berlin.

5.1 The value of nature-based solutions

There is a wide variety of nature-based solutions that were mentioned by interview respondents. Some that were mentioned were reeds, connected greenspaces, artificial wetlands, and frog habitats (Table 1, Respondents 1, 2, 3, 5). The first step to establishing the value of nature-based solutions is to see how many respondents are familiar with the concept. Figure 9 shows that around half of the respondents were familiar. Residents were asked about different elements of nature-based solutions that might give an impression of how they felt even if they did not know of the concept.

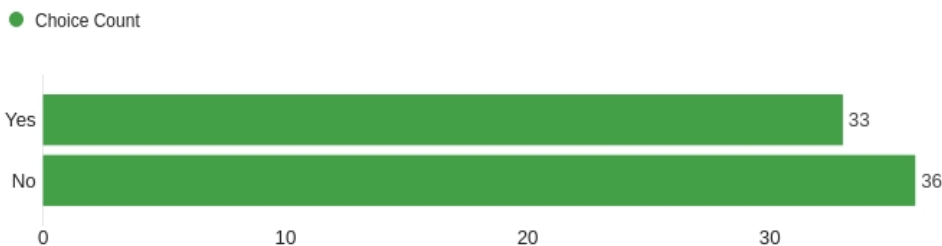


Figure 9: Familiarity with nature-based solutions Meerstad (Author 2022).

The survey results confirm the expectation that residents valued recreation highest (Figure 10), but an unexpectedly high result regarding increasing biodiversity shows that this is an important value for residents. While these results are in absolute numbers, statistical tests outlined in table 2 establish whether there was a relationship between the importance of living near greenspace and water and the satisfaction with elements of nature-based solutions. The tests (Appendix D) show that there was no statistically relevant connection between the two variables. Based on the data, there is a distinction in the values based on natural values and functional values. The lowest values were found regarding preventing flooding and lowering average local temperatures which highlights the need for more education about the less-visible aspects of nature-based solutions. The result of the qualitative analysis illustrates the wider picture.

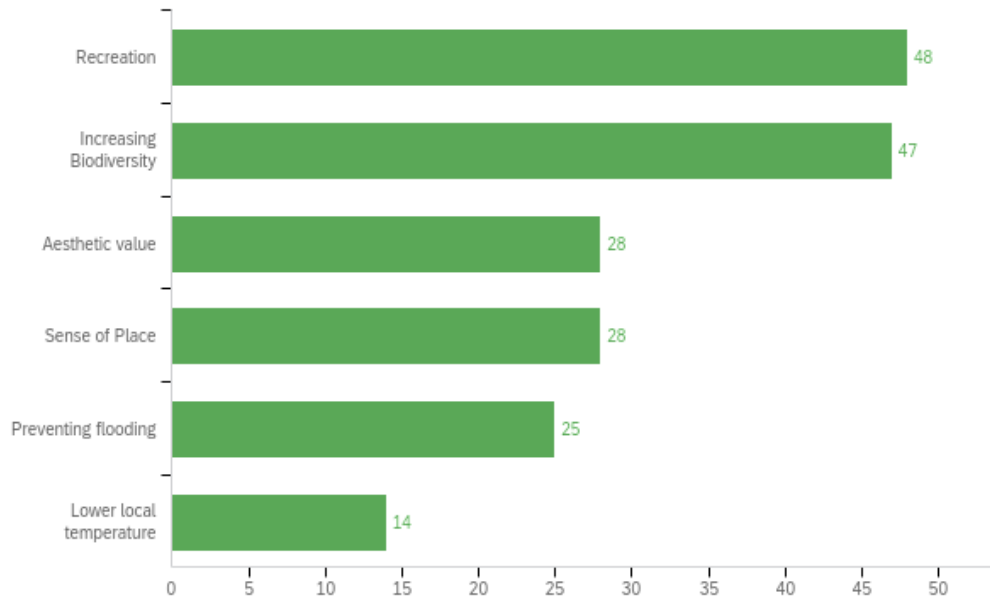


Figure 10: Most important aspects of nature in Meerstad for residents (Author 2022)

The respondent “*Dorpsbelangen*” talked about the quality of the greenspace within Meerstad and how areas can be “green,” but not necessarily considered to be “nature” and made the distinction of greenspaces being able to sustain themselves vs. requiring significant levels of active maintenance. He added that there is a problem that at a certain point you must choose between the values for residents and that of nature. This quote explains the distinction:

“So, you have one model, you make everything green on your terms, you've got to fight it. The other one is nature, you know, don't meddle with it. You can't walk on it; you can't use it. Well somewhere in the middle you need to find yourselves.” - Dorpsbelangen

Multiple respondents mentioned the need for education, specifically about the value of nature for nature's sake and how it can have benefits beyond its immediate recreational uses. Both the *Dorpsbelangen* and *Biologist* mention the value of nature and its socio-cultural values. The quote from the *Biologist* about Harksteder Broeklanden illustrates this:

“We went to the highest court in the Netherlands to defend its existence because it would disappear in the lake at that time. Yeah, and because of the financial crisis, the area is still there. Now it's part of the new plan for nature. So now they recognize that it's a very valuable part of nature also for the citizens of Meerstad because they need to have some areas where they can have their experience with natural values.” - Biologist

The statistics shown in Appendix G show how residents valued different aspects of nature-based solutions. Connection to nature, water features, and connection rated quite high. The outlying data that shows a need for more education on the technical aspects such as the role of sustainability as well as flood protection. Many respondents responded with the option neutral. This could be due to a lack of awareness by the population.

The answer to the question “*How do residents’ value nature-based solutions in Meerstad Groningen?*” is that residents of Meerstad value the recreational values of nature-based solutions highest, but also see biodiversity as an important factor as well. The data shows that there is a separation between the natural and user values. Despite no significant statistical connections, the data still shows that residents value natural and user values. This could help build support for new conservation areas. There still is a need for education, but residents place a high value on both ecological and functional aspects of nature-based solutions.

5.2 Role of citizen feedback

There are many different stakeholders involved in the Meerstad project including Bureau Meerstad, landscape architects, nearby villages as well as residents. Many of the interview participants mentioned the different forms of feedback and how residents were being involved. Table 3 outlines some of the strategies that were mentioned by the interview participants. Despite this the *Bureau* and the *Biologist* both mentioned possible shortcomings. After analysis,

the main takeaway from this section was that despite efforts for integration and involvement, there is still a segment of the population that did not participate in the feedback process. This is confirmed by the results shown in figure 11. The interviews confirm this with the quote:

“You have to be keen on the fact that there is a certain group of people who always are indifferent and those trying to bring up their issues and you have to listen to them, but you also have to listen to the people who don’t” - Bureau Meerstad

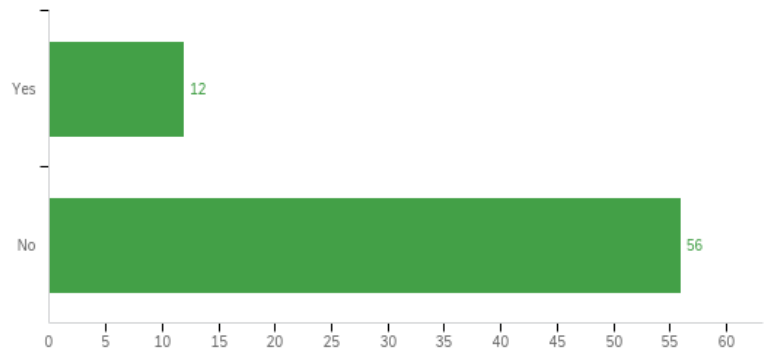


Figure 11: Results of question “Have you participated in the design of Meerstad?” (Author 2022)

This is echoed by the *Biologist*, and he mentions a relevant point that ties into inherent problems with creating a new neighborhood. This quote shows the dilemma:

“All the people living here have an interest in keeping things as favorable as possible for them. But 7000 houses at least are being built here in the next 10 years. So that means that most people that will live here have no say at all at this moment. They’re not represented at this moment.” - Biologist.

The point made by the biologist is important because if the future residents have no say in the process, and only current residents inherently are able to participate in the feedback process. This ties into accessibility because if the most expensive real estate is developed first, wealthy residents can give feedback before less wealthy residents who move in later.

Table 3: Types of Involvement (Author 2022)

Interview Participants	Participation Forms Mentioned
Bureau Meerstad	<ul style="list-style-type: none"> - Feedback sessions - Discussions - Informational presentations (ex: Water quality) - Discussions with young people over pizza - “Kitchen talks” with less active residents
Dorpsbelangen	<ul style="list-style-type: none"> - Discussion tables, dialog tables - Presentation about natural solutions (ex. reeds)
Landscape architect	<ul style="list-style-type: none"> - Feedback sessions - Creation of reports (Bottom-up approach)
Biologist	<ul style="list-style-type: none"> - Excursions - Debates - Tours
Sponsland	<ul style="list-style-type: none"> - Exhibitions of design panels - Open days - Stakeholder meetings with delegates

Unfortunately, most of the respondents who were sampled indicated that they were not involved in the design process. This connects to the positions of the bureau where there are a few notable or active voices, but many residents are simply not involved in the process.

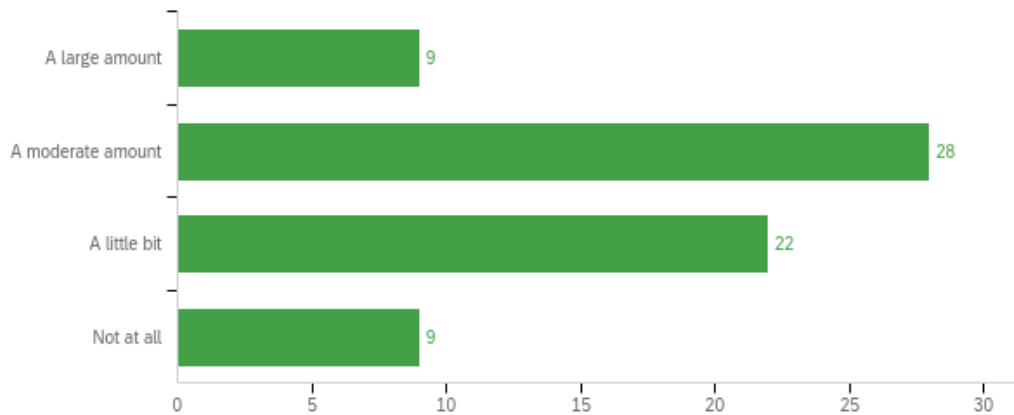


Figure 12: Satisfaction with level of involvement in the design process of Meerstad (Author 2022)

An interesting finding based on figure 12 is that most residents were happy with their level of involvement, even though not many were involved. This could have many reasons; some simply are not involved while it is also possible that those who were involved are also happy with their involvement. To establish whether there was a connection between the familiarity with nature-based solutions and citizen involvement Mann-Whitney tests were conducted between familiarity and the three decision-making questions (Table 2). There were no statistically significant results (Appendix E).

This answers the research question “*What role has citizen feedback had on the design and implementation of nature-based solutions in Meerstad?*” The changes have been predominantly top-down, but there have been movements to get involved. One example is from the *landscape architect* who designed a project, and gathered support with very good results as described below:

“I did a project together with a neighbor who lives also on a houseboat, a couple of ships south. And we, together with the project bureau, got around to having a good plan made. And we’re seeing results. The first reeds are growing.” – Landscape Architect

This deeper level of involvement confirms the expectation that better sustainability outcomes can be in fact reached from empowering residents (Kiss et al., 2022). The Bureau lacked the technical expertise to effectively implement the reeds project and through empowerment, better outcomes were achieved. There are efforts to include residents and while most are satisfied with their level of involvement (Figure 12) there is still room for improvement. Increased involvement should be paired with education to help avoid worse sustainability outcomes that can be caused by citizen engagement as described in the literature (Wamsler et al., 2019).

5.3 Which aspects provide the most environmental benefits?

Interview respondents mention quite a few benefits that arise from the implementation of nature-based solutions. One solution that appears in most of the interviews is the reeds. This solution was initially introduced by the Bureau, but the implementation has been mixed, it only succeeded after the *landscape architect* intervened. This example shows some of the dynamics at play in

the neighborhood. The *landscape architect* mentions that a lack of expertise has hindered the process. She illustrates this in the quote describing the attempt at growing reeds:

“They have this iron grid idea about where the reeds should be, they have tried to plant them for 9 years and it didn’t work. They took half measures. The area needs to be one to two feet deep, in the deeper area’s reeds don’t grow.” - Landscape architect

The lack of expertise is also talked about by the *biologist* as well. He mentions that this is a problem when attempting to construct new nature in the area. He illustrates this lack of expertise in the quote:

“In this organization they have no expertise, they have no ecologists. They have no knowledge of that. So, they are depending on external expertise and for such a big area we just advised that they should take care of organizing advice at a national or even international scale for such an area.” - The biologist

Table 4: Outline of Nature based solutions and their benefits in Meerstad from interviews (Author 2022)

Nature based solution	Benefits
Reeds	<ul style="list-style-type: none"> - Improvement of water quality - Habitat for birds and other species - Maintain nutrient balance of water
Water storage ponds	<ul style="list-style-type: none"> - Habitat - Recreation areas - Preventing flooding - Water storage for times of drought
Frog habitat	<ul style="list-style-type: none"> - Preserving biodiversity
Constructed wetlands	<ul style="list-style-type: none"> - Improved water quality - Habitats
Planting flower bulbs	<ul style="list-style-type: none"> - Food source for bees
Forest nature reserves	<ul style="list-style-type: none"> - Connection and appreciation for nature - Facilitating movement of species
Lake Islands	<ul style="list-style-type: none"> - Breeding areas for birds - Protection from waves
Trees	<ul style="list-style-type: none"> - Shade - Wind protection - Habitat - Combats heat island effect
Fish tunnels	<ul style="list-style-type: none"> - Improve ecosystem of lake - Facilitates movement of species

Neighborhood Park	<ul style="list-style-type: none"> - Habitat - Social space for meeting
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While appendix G and figure 10 show the most important aspects of the nature-based solutions and resident satisfaction, there are many more benefits outlined in table 4. This answers the research question “*Which nature-based solutions provide the most benefits to residents?*” While recreation is seen as the most important aspect in figure 10, there are also less-defined benefits such as good water quality and flood prevention which was not very well known but all residents benefitted from. The interviews helped to fill in the gaps left by the survey because professionals and concerned citizens all have different types of expertise and knowledge of more benefits. Reeds and greenery such as trees topped the list in terms of relevance due to the number of benefits and mentions in the interviews.

5.4 Social access to Nature-Based Solutions

An unexpected finding was the connection between nature-based solutions and class. In the example of Meerstad, most houses were created for high-income individuals. Many of the respondents mentioned this. They also discuss to varying degrees the need for integration and social mixing. This topic emerged naturally and is supported by the CBS data which shows that the neighborhood consists of predominantly owner-occupied single-family housing (CBS in uw buurt, 2022). As social stratification emerges as a problem in the future of the neighborhood, *bureau Meerstad* illustrates the problem well.

“But we realize that we are moving towards dividing our population again. I mean you need a certain income to be able to live in Meerstad. And there is quite a number of people who can’t afford it” - Bureau Meerstad

The *landscape architect* gives a clue to some of the possible causes of this:

*“Yes, the banking crisis in 2008 affected housing prices and mortgages. They had planned on executing the plan in 2008 but couldn’t because nobody was buying houses. So, they changed the plans and started with the most expensive houses which is what you see around”
- Landscape architect*

The biologist also mentioned this phenomenon and how it was expressed spatially:

“It will be clear that there will be large groups of houses that are near the Eems Canal and more in the direction of the city of Groningen. Yeah. I could predict now that there will be a social structure of the lower class near Groningen and at the far end it will be higher class. This with expensive houses on expensive grounds and only a few can afford” - Biologist

This section highlights an unanticipated finding but helps to fill the research gap of the effect and interaction between society and nature-based solutions. The social stratification in the neighborhood shows that access to the benefits of nature-based solutions can be restricted to

those who can afford to live in the areas where they are being implemented. This ties into the findings on citizen participation as the lower-income housing is built later allowing wealthy individuals a say earlier in the design process.

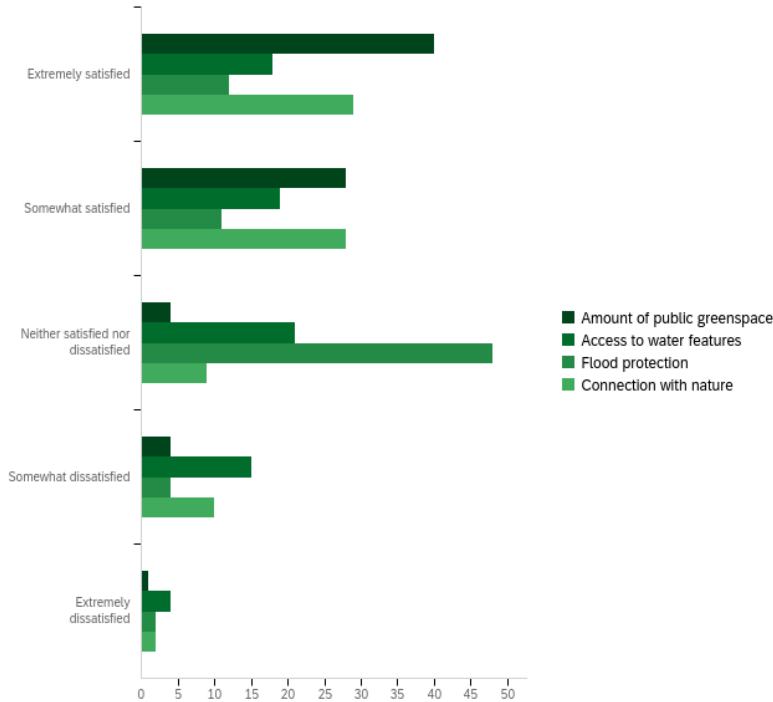


Figure 13: Satisfaction with each element in neighborhood Berlin (Author 2022)

5.5 Berlin and Meerstad Comparison

In Berlin, the research objective was slightly different from the research being conducted in Meerstad, but the themes were still related. The results of the statistics from the surveys in Volkspark in Berlin show that there was a similar finding when it came to the function of nature-based solutions to prevent flooding. During data collection, respondents commented that flooding was not a problem in Berlin. The research question “How do attitudes on aspects of nature-based solutions from park users in Berlin compare to the attitudes of residents of Meerstad, Groningen?” is answered by comparing their

perceptions. This led to the conclusion that the difference in cultures accounts for the perception of flooding, as the neighborhood of Meerstad is below sea level and even *Bureau Meerstad* mentioned that had they designed the project today they would rethink the design due to the dangers presented by climate change and the low geographical location illustrated by the quote:

“People are recognizing more and more that the water level during the seasons is increasing due to climate change. We are living in the risk area and we are protected with dikes, but there is a limit and people are realizing that the water level in oceans is increasing and the water level will rise faster.” - Bureau Meerstad

The feeling of risk is higher in Meerstad as opposed to residents of Berlin who did not see flooding as a big problem. This also warranted our changing of our explanations to cover heavy rain rather than sea level rise.

6. Conclusions

In conclusion, based on the data collection in Meerstad and Berlin, the research questions were answered, specifically the main question “*How do residents value nature-based solutions in Meerstad Groningen?*”. Residents in Meerstad value access to greenspace and water, specifically with a focus on the potential for recreation and biodiversity, while the user benefits were apparent, residents had less of an awareness of the environmental aspects such as water quality and flood protection and the heat island effect despite also benefitting from them (Qi et al., 2020). These findings are relevant but can't be generalized as the level of education and awareness is context dependent.

While not everyone is involved in the design and implementation of nature-based solutions, there have been consistent efforts from Bureau Meerstad to involve residents. The interviews made it apparent that there is additional need for expertise, and in the case of the reeds, citizen feedback has helped to bridge the knowledge gap. This finding subverts the expectations and shows that citizen participation doesn't always yield worse sustainability outcomes as in this context it significantly improved results (Wamsler et al., 2019). These outcomes were achieved through a partnership which is a higher level of involvement and citizen power (Arnstein, 1969). This confirms that deeper levels of engagement can improve outcomes not only ecologically, but also socially as the project was created bottom-up by engaging multiple residents (Kiss et al., 2022).

An unexpected finding was the social aspect. There was a high degree of exclusion within the neighborhood based on wealth, partly due to the 2008 global financial crisis which led to a focus on more expensive housing. These findings confirm the problems explained in the literature and leads to further questions about access to the benefits of nature-based solutions, class barriers and equity (Kabisch et al., 2016). The literature indicated that these issues of accessibility are present not just in Meerstad, but also in similar projects around Europe (Medved, 2017). This indicates that the findings on accessibility can be generalized and are relevant when implementing nature-based solutions in different contexts.

The results from the Berlin section highlight that the cultural context is important in understanding the need for specific nature-based solutions. The differences in attitudes towards flooding protection led to the conclusion that the values can't be generalized as the context heavily influences which solutions are applicable in each area. as well as the level of importance assigned to the benefits from them.

7. Discussions & Reflections

7.1 Recommendations

Implementing social housing within the neighborhood can help prevent complete exclusion based on wealth by creating lower-income housing units. When implementing nature-based solutions, there is a strong need for technical and ecological expertise to ensure the longevity of the project. Allowing for nature to develop without human intervention would help to build self-sufficient natural areas and not simply “greening.” Bureau Meerstad would benefit as it would receive the benefits of nature-based solutions without the need for costly maintenance. The most important recommendation for the Bureau is to create a program to educate residents on the benefits of nature-based solutions and the value of nature. This would help increase citizen involvement, generate interest in preserving nature, as well as helping to spread useful ideas and a sense of place and community within the neighborhood.

For future research, investigating the connection between nature-based solutions, awareness of environmental issues, and social functions for children would help to create a better environment for young people which is lacking in Meerstad. More research into accessibility of nature-based solutions and spatial inequalities would be particularly relevant due to the findings as the same issues appeared in many other projects.

7.2 Strengths + Limitations

Strengths included surveys as they opened the door to more interview respondents who would be otherwise unavailable. Some limitations are that the 4th research question about benefits has a strong overlap with values. Considering the results, a different question more focused on social aspects and accessibility would be more fitting for the research. A strategy that would yield better results would be to present the analysis of the survey to interview respondents and ask for commentary, but due to the simultaneous data-collection method this was not feasible. A longer data collection period in Berlin could also yield more insight internationally.

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Appendix A:



university of
groningen

faculty of spatial sciences

Toestemming Het doel van dit onderzoek is het verzamelen van gegevens over Meerstad voor een afstudeeronderzoek van de Rijksuniversiteit Groningen over natuurgebaseerde oplossingen. De enquête is anoniem om de respondenten te beschermen en gegevens worden exclusief verzameld en verwerkt door de auteur van het proefschrift. Het onderzoek levert geen winst op en is uitsluitend voor wetenschappelijke doeleinden.

- *Ja, ik geef toestemming*
- *Nee, ik geef geen toestemming*

1. Bent u bekend met op de natuur gebaseerde oplossingen? *Ja / Nee*
2. Wat is uw leeftijdsgroep? *0-18, 19-30, 31-50, 51-65, 65+*
3. Hoe lang woont u al in Meerstad? *Minder dan 1 jaar, 1 tot 3 jaar, 3 tot 5 jaar, 5 tot 10 jaar, Meer dan 10 jaar*

Belang van de natuur

	Uiterst	Een Beetje	Neutraal	Niet Veel	Helemaal Niet
Hoe belangrijk is het voor u om dichtbij groen te wonen?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hoe belangrijk is het voor u om in de buurt van water te wonen?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Hoe tevreden bent u over elk onderdeel van Meerstad?

	Zeer tevreden	Een beetje tevreden	Neutraal	Een beetje ontevreden	Zeer ontevreden
Hoeveelheid groene ruimte	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Toegang tot waterpartijen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Duurzaamheid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overstromingsveiligheid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verbinding met de natuur	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- Esthetische waarde
- Unieke plaatsen

7.
Heeft

u meegewerkt aan het ontwerp van Meerstad? *Ja / Nee*

8. In hoeverre heeft de gemeente u betrokken bij de besluitvorming over meerstad?

- *Een zeer grote hoeveelheid*
- *Een matige hoeveelheid*
- *Een beetje*
- *Helemaal niet*

9. Hoe blij bent u met uw mate van betrokkenheid bij de besluitvorming?

- *Een zeer grote hoeveelheid*
- *Een matige hoeveelheid*
- *Een beetje*
- *Helemaal niet*

10. Hoe bereid zou u zijn om deel te nemen aan ontwerpbeslissingen?

- *Uiterst*
- *Een beetje*
- *Neutraal*
- *Niet veel*
- *Helemaal Niet*

11. Welke veranderingen zou u graag zien met natuurontwerp in Meerstad?

- *Meer recreatie*
- *Meer burgerbetrokkenheid bij besluitvorming*
- *Meer Water*
- *Meer groene ruimtes*
- *Niet*

12. Heeft u nog iets toe te voegen over natuurontwerp in Meerstad?

Bedankt voor je tijd!

Appendix B:

Statistics test Planning

1.	Are you familiar with nature-based solutions?	Binary	Yes / No	Establish whether residents are aware of topic
2.	What age group are you in?	Ordinal	0-18, 19-30, 31-50, 51-65, 65+	Socio - demographic data for context
3.	How important is it for you to live near greenery?	Ordinal	<ul style="list-style-type: none"> • Extremely • Somewhat • Neutral • Not very • Not at all 	This question aims to establish how important nature is in relation to their living environment
4.	How important is it for you to live near water?	Ordinal	<ul style="list-style-type: none"> • Extremely • Somewhat • Neutral • Not very • Not at all 	This question aims to establish how important water is in relation to their living environment
5.	How satisfied are you with each element of Meerstad? <ul style="list-style-type: none"> • Amount of greenspace • Access to water features • Sustainability • Flood protection • Connection with nature 	Ordinal	<ul style="list-style-type: none"> • Very satisfied • Somewhat satisfied • Neutral • Somewhat dissatisfied • Very dissatisfied 	The aim of this question is to establish how residents value different elements that are connected to nature based solutions
6.	Select the most important aspects of nature in Meerstad for you (Water, Green)	Nominal	<ul style="list-style-type: none"> • Increasing biodiversity • Preventing floods • Recreation • Lower local temperature • Aesthetic value • Sense of place 	Establish which elements of nature based solutions provide the most benefits for local residents
7.	Did you participate in the design of Meerstad?	Binary	Yes / no	The aim of this question is to find out how many residents

				participated in the design of the neighborhood
8.	To what extent has the municipality involved you in decision-making about Meerstad?	Ordinal	<ul style="list-style-type: none"> • A large amount • A moderate amount • A little bit • Not at all 	The aim is to find out the level of involvement within the neighborhood
9.	How happy are you with your level of involvement in decision-making?	Ordinal	<ul style="list-style-type: none"> • A large amount • A moderate amount • A little bit • Not at all 	The aim of this question is to help find out how satisfied residents are with the decision making process
10.	How willing would you be to participate in design decisions?	Ordinal	<ul style="list-style-type: none"> • Extremely • Somewhat • Neutral • Not very • Not at all 	This question aims to answer how involved citizens would like to be
11.	What changes would you like to see with nature design in Meerstad?	Nominal (Multiple answer)	<ul style="list-style-type: none"> • More recreation • More citizen involvement in decision-making • More water • More green space • Nothing 	The

Appendix C:

Thesis Interview guide
Nature based solutions Research (Meerstad)

Updated Research Questions:

1. *“How do residents value nature based solutions in Meerstad Groningen?”*
2. *“What role has citizen feedback had on the design and implementation of nature based solutions in Meerstad?”*
3. *“Which aspects of nature based solutions provide the most benefits for citizens of Meerstad?”*

Interview Guide

Before the official questions begin there will be a quick ice breaking session where I give some background on myself and the nature of the research. During this part of the interview I will also ask the interviewee to say a few words about themselves to help establish some context.

Questions for meerstad professionals:

1. *“When did you begin your involvement in the Meerstad project?”*
2. *“What was the motivation behind incorporating the water areas and the specific greenspace to living space ratio?”*
3. *“Which nature based solutions have been included in your design considerations?”*
4. *“What was your role in the design process?”*
5. *“How has the project changed once residents began to move into the neighborhood?”*

6. *“Which nature based solutions have benefitted residents the most?”*
7. *“Has there been the feedback of residents on nature based solutions implemented within Meerstad? (ex. Greenspace, lakes, water storage)”*
8. *“How has citizen feedback influenced the design process?”*
9. *“Do you actively work with residential groups active within the neighborhood?”*
10. *“How effective have the nature based solutions been within Meerstad in relation to ecology and biodiversity?”*
11. *“How do you see the neighborhood changing into the future, especially in regards to nature based solutions?”*
12. *“Which nature based solutions have had the greatest impact on the neighborhood?”*

Questions for interest group interview (Dorpsbelangen):

1. *How did your interest group form and how long has it been actively involved with bureau Meerstad?*
2. *How have bureau Meerstad and the local authorities involved citizens in the past?*
3. *How has the neighborhood changed since the initial 2005 plan?*
4. *What are the most important priorities for the citizens of Meerstad?*
5. *What role do natural areas play in meerstad? How do they impact residents?*
6. *Are citizens aware of the concept of nature based solutions and their role in the neighborhood?*
7. *How has citizen feedback influenced the design of nature in Meerstad? If it hasn't then why?*

8. *How would citizens like to see Meerstad develop into the future?*

9. *How can bureau meerstad better involve local residents?*

Questions for landscape architects:

1. *When did you begin your involvement in the Meerstad project?*

2. *How has the design of nature within the neighborhood changed since 2005?*

3. *Which nature based solutions have been implemented within Meerstad?*

4. *What was your role in the design process?*

5. *Which nature based solutions have impacted residents the most?*

6. *How has citizen feedback influenced the design of nature within Meerstad?*

7. *As both a resident and professional working and living in Meerstad how has your experience been from both sides?*

8. *How effective have nature based solutions been in the neighborhood? How can the design be improved?*

9. *How has the implementation of changes proposed by citizens played out?*

10. *What are the most important natural elements of Meerstad for residents?*

11. *How do you envision Meerstad once it is complete? What could planners do to create a more sustainable neighborhood?*

Appendix D:

Nonparametric Correlations

Correlations

			How important is it for you to live near greenery?	How satisfied are you with each element of Meerstad? - Amount of greenspace
Spearman's rho	How important is it for you to live near greenery?	Correlation Coefficient	1,000	,084
		Sig. (2-tailed)	.	,494
		N	69	69
	How satisfied are you with each element of Meerstad? - Amount of greenspace	Correlation Coefficient	,084	1,000
		Sig. (2-tailed)	,494	.
		N	69	69

Nonparametric Correlations

Correlations

			How important is it for you to live near greenery?	How satisfied are you with each element of Meerstad? - Connection with nature
Spearman's rho	How important is it for you to live near greenery?	Correlation Coefficient	1,000	,121
		Sig. (2-tailed)	.	,321
		N	69	69
	How satisfied are you with each element of Meerstad? - Connection with nature	Correlation Coefficient	,121	1,000
		Sig. (2-tailed)	,321	.
		N	69	69

Nonparametric Correlations

		Correlations		
			How important is it for you to live near greenery?	How satisfied are you with each element of Meerstad? - Sustainability
Spearman's rho	How important is it for you to live near greenery?	Correlation Coefficient	1,000	,142
		Sig. (2-tailed)	.	,244
		N	69	69
	How satisfied are you with each element of Meerstad? - Sustainability	Correlation Coefficient	,142	1,000
		Sig. (2-tailed)	,244	.
		N	69	69

Nonparametric Correlations

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		Correlations		
			How important is it for you to live near water?	How satisfied are you with each element of Meerstad? - Access to water features
Spearman's rho	How important is it for you to live near water?	Correlation Coefficient	1,000	,106
		Sig. (2-tailed)	.	,387
		N	69	69
	How satisfied are you with each element of Meerstad? - Access to water features	Correlation Coefficient	,106	1,000
		Sig. (2-tailed)	,387	.
		N	69	69

Nonparametric Correlations

Correlations

			How important is it for you to live near water?	How satisfied are you with each element of Meerstad? - Flood protection
Spearman's rho	How important is it for you to live near water?	Correlation Coefficient	1,000	,174
		Sig. (2-tailed)	.	,153
		N	69	69
	How satisfied are you with each element of Meerstad? - Flood protection	Correlation Coefficient	,174	1,000
		Sig. (2-tailed)	,153	.
		N	69	69

Appendix E:

	Are you familiar with nature based solutions?	N	Mean Rank	Sum of Ranks
To what extent has the municipality involved you in decision-making about Meerstad?	Ja	33	33,20	1095,50
	Nee	35	35,73	1250,50
	Total	68		
How happy are you with your level of involvement in decision-making?	Ja	33	36,39	1201,00
	Nee	35	32,71	1145,00
	Total	68		
How willing would you be to participate in design decisions?	Ja	33	32,17	1061,50
	Nee	35	36,70	1284,50
	Total	68		

Test Statistics^a

	To what extent has the municipality involved you in decision-making about Meerstad?	How happy are you with your level of involvement in decision-making?	How willing would you be to participate in design decisions?
Mann-Whitney U	534,500	515,000	500,500
Wilcoxon W	1095,500	1145,000	1061,500
Z	-,546	-,812	-,998
Asymp. Sig. (2-tailed)	,585	,417	,318

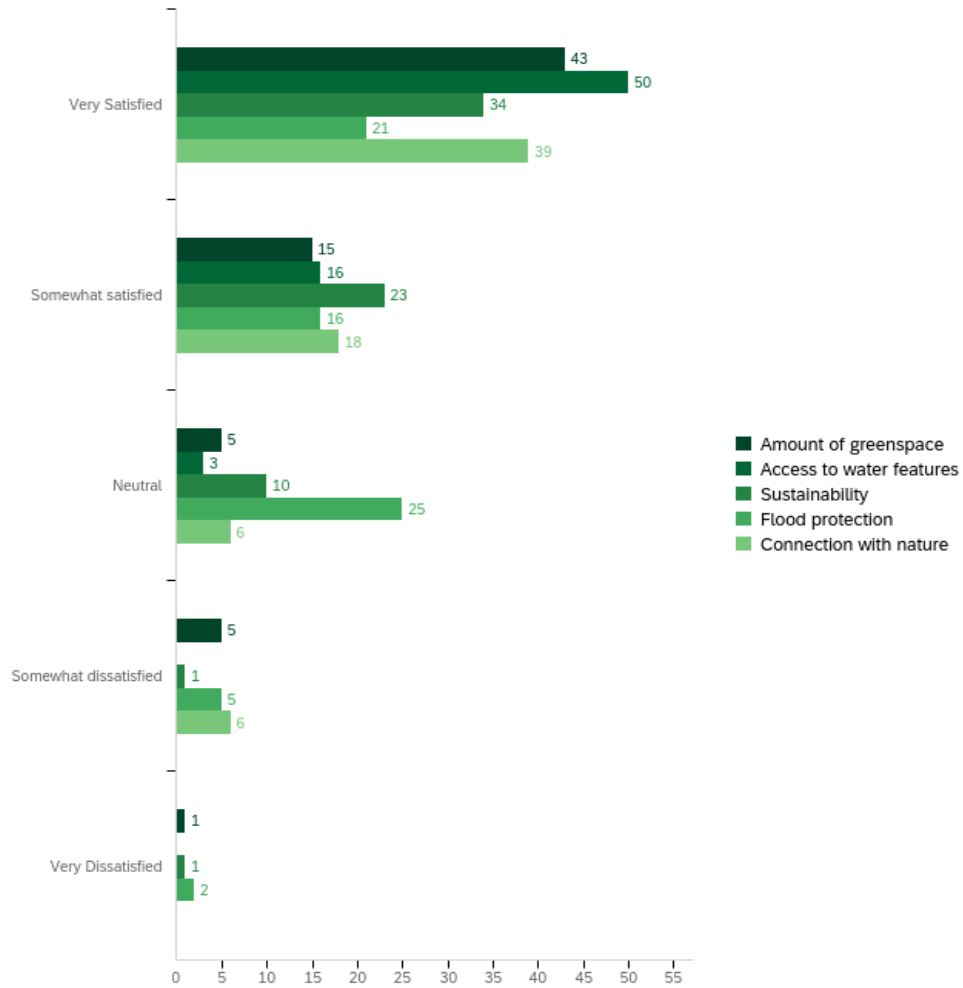
a. Grouping Variable: Are you familiar with nature based solutions?

Appendix F:

Table 5: Code Book

Concept	Code group	Code	Number of Mentions
Nature based Solutions	Solutions	Benefits	32
		Type of Intervention	40
	Design and implementation	Effects	30
		Actors	29
		Problems	49
Citizen Involvement	Decision-making process	Ways of Involvement	33
		Stakeholders	35
		Outcomes	14
Social access			19

Appendix G:



Satisfaction with aspects of nature-based solutions of residents, Meerstad (Author 2022)

Appendix H (Bureau Meerstad Transcript):

Bureau_Meerstad.m4a

Speaker 1 [00:00:01] Okay.

Speaker 2 [00:00:03] So my first question is, when did you begin your involvement in the Meerstad Project?

Speaker 1 [00:00:08] 2003. I'm the longest sitting member of the team. Mm hmm.

Speaker 2 [00:00:15] And the in the project, the vision was kind of started in 2005, right?

Speaker 1 [00:00:22] Yeah. The first works, you mean? Mm hmm. Yeah. Yes. But it started already before, it started somewhere in the nineties with, how do you call it, thinking about what are the possibilities, uh, initiative phase, I would say, uh, but also looking if we can get the land from the farmers. Hmm. And, um, they tried to gain as much area for this big plan. Mm hmm. Because if there is a big plan and the prices will increase, and they try to get prices as low as possible.

Speaker 2 [00:00:59] Mm hmm. So what was the motivation behind incorporating water areas and specific green space within the living space ratio? Like the one third, one third, one third.

Speaker 1 [00:01:12] That was the beginning in that, first of all, we have a lot of water. And this is almost the lowest point in the area in the province of Groningen. And we had a lot of issues with water in the late nineties because of we have Drenthe, which is the land from the end of the ice, ice time sculptured. Mm hmm. And we have we had a lot of trouble to get the water which was falling there. It's coming over here. But we couldn't open the locks to the sea so we couldn't get rid of the water. So we needed more space to save the water.

Speaker 2 [00:01:54] Yeah.

Speaker 1 [00:01:55] To store the water. Yeah, and that is one of the issues. But Dutch people love and like to to live on on the water shore. We are always living with living and fighting with water. And, uh, sometimes you love it and sometimes you hate it. But all in all, I think it's a marketing issue. But but people like to live on on the water with water. And Groningen needs to have an increase of a lot of the number of, of, of houses.

Speaker 2 [00:02:31] Mm.

Speaker 1 [00:02:32] And this was a nice opportunity, the land was bad because it was the lowest area, wet area. Yeah. So in the, in the thinking, the mindset of that moment, it was one of the most logical parts around Groningen to start the development of, to increase the city of

Groningen. You know I think when they would have made to make the new um start planning we would rethink this. Uh, people are recognizing more and more that the, the water level on season due to the climate changes is increasing more and more and more. And then we are living in the risk area and we are protected with dikes. There wouldn't be a any dike here and the last time in high water in Delfzijl the water level was around 85 above sea level. And we are living here two meters below. We are building one meter and ten below, but there will be five meters of water over here. So this is not something you look forward to. Hmm. And of course, we are we are protected by it, by massive dikes. And we are the skills we have in Holland to fight for the water. But there is there is a limit. And people are realizing more and more that when the water level in the oceans are increasing more fast than the level will rise sooner.

Speaker 2 [00:04:06] Yeah.

Speaker 1 [00:04:07] No one knows when that, uh, that's one of the issues. And I think this issue of the overall world and we know that in Bangladesh there is a large pain, for this issue, but also in parts of Groningen and in Germany. So there is the main thinking that is changing a little bit.

Speaker 2 [00:04:29] Yeah. So basically when the plan was conceived it was a lot different, very different context as well. Yeah. As opposed to today, are you familiar with the concept of nature based solutions?

Speaker 1 [00:04:43] Yeah. The way we tried nature based solutions. Yeah. That's always difficult. There's always a difficulty between people living in then and, uh, planning the infrastructure. Mm hmm. Innovation to the nature. And, of course, we are doing the utmost to work in a good combination. And we are doing for, for instance, the water quality, which is one of the issues there are huge efforts to get the most optimum water quality in Meerstad. The woldmeer is an island within the whole area around this. That is, we are we are maintaining that we are using the water which is which is coming in and we are storing that water. We use that water, you know, to get to an optimum water biome. Mm hmm. And we have made a lock to connect to the, uh, for for reparations for irrigation, both in lock there is in the so-called fish trap so that the fish can go in and out.

Speaker 2 [00:06:05] Yeah.

Speaker 1 [00:06:05] And then the lock is automatically filling in and in a certain sequence so that fish can go in and go out. Mm hmm. Uh, we are doing a lot for. Have we have some species of frogs here which are, um, not common anymore. Then we got the hikkker frog, and on average we make special areas for them to to live in. Uh, we are looking forward how we can, the level of the of the area in relation to the level of the of the water, the groundwater level. Mm hmm. We are trying to optimize it, too. We are looking where we can connect things and how we can make areas which are, uh, between wet and dry. Uh, so, so that is, it is a lot we are doing at this moment already. Yeah Meerstad we are living above one of the biggest gas storage areas, in Europe, in Groningen. But this this this project was the first project in the

Netherlands which is built without using gas. Hmm. You have no gas here. So imagine we are on top of the one of the biggest.

Speaker 2 [00:07:31] Yeah.

Speaker 1 [00:07:32] But we don't use gas here.

Speaker 2 [00:07:34] Quite a big, uh.

Speaker 1 [00:07:36] So that's also a big step in that moment, you know? But it's all because of the, the, the climate change, because of environment, because of, uh, trying to combine things in an optimal way as far as possible as far as we know in this moment.

Speaker 2 [00:07:53] Yeah. Actually spoke to a resident within the neighborhood and she's a landscape architect and she was talking about the planting of the reeds around the island. Yes. And, um, and kind of the process of changing it as well, which.

Speaker 1 [00:08:06] Is rather difficult. Yeah. Because it is growing in places they don't want it and were you want it it doesn't grow. So now we are in this moment working on the reeds again to improve it and you know, trying to find out how we can how we can make the conditions as optimum as possible. Yeah, reed is a plant which we need in the water approximately that this is a goal for us that 17% of the water area will be reed and it would be wet and this is this is all because the reed is growing by the nutrients which are in the water. Mm hmm. So if we want to take nutrients out, we have to plan reeds.

Speaker 2 [00:08:56] Yeah.

Speaker 1 [00:08:57] The only thing is that if the reed is starving, you have to remove it. Otherwise the nutrients are getting back in the water again. Yeah. To store it in the plant. So the plant, if you the plant is going to die and you leave it into the water, the nutrients will come back. Yeah. So we have a whole system of, uh, trying to, to, to maintain the reeds in such a way that we are before it is dying, cut it off and we do not do it at one time all, but we do it in phases in different places. So that that is the bio top is is dynamic.

Speaker 2 [00:09:38] And balance as well to make sure it's not too much of any one element. So how is the how is the project changed once residents begin to move in? Because there was an original plan, and I know that it's being developed like piece by piece and it's still in construction as well. But how has that change happened since the original inception of the plan?

Speaker 1 [00:10:02] Yeah when we started the plan, there was an idea that we were building 650 houses per year. Hmm. And the idea was that the trees are going to the heaven, so the housing will be sold and no problem at all. And then in 2008.

Speaker 2 [00:10:17] Yeah.

Speaker 1 [00:10:18] The first first time the crisis, it started all in America. And we were confronted, we didn't sell any any plots anymore and took over. And then we realized that 650 houses in a year is quite a lot. Mm hmm. If you want to do that continuously until 10,000 houses are built. But it looks. It looks possible. But in the end, when you then imagine how many building materials you need or the kind of traffic, you get etc. That these are a lot of efforts which we couldn't realize in that moment. And we started to think about what will be what will be a goal. Which possible goal? Mm hmm. And we ended up with 250 houses a year. That's almost. Yeah. So you mentioned if you the taking the time as you are building it all and it will increase three times. Yeah. But that's good. Mm hmm. But what? You don't get that you get a longer period for realizing the project and during the commuting time. Opinions are changing. People are changing every time there are new opportunities, which I have to look in and the people around there and people they are thinking that there will be a big plan. They were against the plan. Mm hmm. And then it. Okay, we go in, then it'll be quite a short period. And then suddenly to be, it's a little longer. So that's a also an effect. So. And. The first plans which were made were from from from the basic. But now we realize that to have you have to make changes and we have adapted the plan on the circumstances which they are now.

Speaker 2 [00:12:25] Yeah.

Speaker 1 [00:12:28] So we are now in this moment, we make an agenda for the future.

Speaker 2 [00:12:35] Yeah.

Speaker 1 [00:12:36] And trying to put together a landscape with the city developers. Yeah, we're trying to make up our mind. And that making up of the mind is also that the Participants. The people around Meerstad, they are getting more and more important. Important. Those are the political ones that are getting more and more important. So they have to be consulted. They have to be. So we are taking them with us in our travel to to the future. And and we have decided, because it is a large plan, for Americans I realize its small but for Holland this is large. So we divided it in three portions. And for the people which were around it and we sit with those people together and we ask them, what are your ideas? I think we made we made a little bit of sketch and several sketches, and then we asked them, what do you think about it and why we should optimize. do we have to combine things. And so we give the people we give them opportunity to bring in their ideas. And in that respect the youth has the future. So let also the younger people try to consult them. So we made, due to corona it was rather difficult and we had to do it in teams and then and zoom and those kinds of things. But in the end we succeeded and we even entered in one of the gaps in the corona. We had a live discussion with the, with the young people. We bought a pizza and they had pizza and be sitting together and they could make small notes and they could write stuff out. So we tried to have to gain a lot of information from, from the surroundings. Yeah. But also from neighbor communities, community of Groningen Midden, which is also a bordering at the lake. And we asked them also, they are

not financially involved but we asked them do think with us, for water management we took the waterschappen in Holland. Yeah. The bureau that is responsible for the water.

Speaker 2 [00:15:18] Like water.

Speaker 1 [00:15:19] Management.

Speaker 2 [00:15:20] Like water implementation.

Speaker 1 [00:15:21] Yeah. The safety, the quality and those kind of things. We have also the nature. Companies you can say from the government. Yeah. So we involved all kind of people. We thought, we looked at the traffic. What will be the problem of traffic in the north of Holland? Is this going to be a discussion about the sticky stuff? You know, so there we have to make up our mind and know do have nature areas in the nearby surroundings which are affected by this plan. And yes, if they are there, how much they are affected, then what can we do to decrease the effect? All those things are put on and. Yeah. I mean, the people that they bring in together. And now in these moments, this might be the first document, but there's more to the future of Meerstad it is in progress.

Speaker 2 [00:16:39] Yeah. So the continuation of the plan, how it changes into the future.

Speaker 1 [00:16:42] And how, you know, what about what are the main objectives, the main goals we want to achieve and how we want to achieve that and what will be the living area for the for the people who are living here. Yeah. How much it will affect them. It affect them of course, during the whole construction but will also affect them afterwards we try to take them with us and to explain to them what will we do, how we how we see them, what will be the effects? Yeah. And of course it is impossible to satisfy everybody and be trying to, um. To be somewhere in the middle. Yeah. And trying to, to find compromises. Where everybody can find himself back.

Speaker 2 [00:17:29] Yeah. So how would you say residents value natural areas and these natural elements such as greenspace and the water in the lake? Has there been a lot of feedback from the residents about these natural aspects? What would you say are people's kind of opinions on these elements of the neighborhood?

Speaker 1 [00:17:54] React positive. That for sure, everybody wants to live a little bit in in a wider area of course. There is water, no buildings. So, yeah. And you can see the free space in front of you. People realize in Holland more and more that the nature is important. And so we want to give nature also a place. Yeah, but there are also limits. Yeah, the limit is that sometimes we are overdoing it and looks like the nature is more fabulous than human beings and that we have to forget. But all over the people appreciate, um, the water, the nature and the one third, one third, one third idea which we cannot. In this moment, we cannot promise, you know, in the total scale due to all kind of circumstances.

Speaker 2 [00:19:02] Yeah.

Speaker 1 [00:19:02] It's an original idea. The one third, one third, one third in total, remain, but it will be more. Here the lake is one third and the housing one third, but it is not too much integrated.

Speaker 2 [00:19:19] Yeah. Yeah.

Speaker 1 [00:19:20] And we're looking forward to, to see if we can get that more integrated to get it done. Uh, but then you get the problem of maintaining it. And if you have a reasonable forest, you can find people going to maintain it and going to look after it if you have a reasonable water area. But if it is all small, small, small, within, then the city of Groningen, they will have to maintain it and then not, let's say, financial. That is difficult.

Speaker 2 [00:19:56] Yeah, I think that's also maybe one change in approach in the Dutch way versus the US. In the US, nature isn't really seen as something integrated within per se. It's something more, um, just left alone. Like there's nature away from us, like that's there and here. I think in the Netherlands you do have this pressure to use the land as intensively as possible. Yeah. Given the lack of it. Yeah. You know, especially here, that's below sea level. It takes so much to maintain kind of the status quo keeping it afloat in the first place. So I think it's quite interesting actually that you have to maintain it. You have to think about, okay, who's going to take care of the forest, how will it be? And even talking with like some of the residents, everyone has kind of a little bit of a different opinion, I think. So when I was talking to the landscape architect, she said, Well, the people that live next to the reeds, they have already been there. They say, Oh, it's wonderful. We have like the birds, we have this nature next to us. But then when trying to sell people on, okay, we need to plant more, they're like, No, we don't want this next to our house it is going to be too loud. And you know from this so.

Speaker 1 [00:21:00] Flies.

Speaker 2 [00:21:01] Yeah, the flies.

Speaker 1 [00:21:02] So that. Yeah, yeah.

Speaker 2 [00:21:05] And I think it was quite interesting she mentioned that there was some plants that were growing already, some trees and she said, well, this wasn't in the plan. So they actually were like trimmed down by, you know, by I think like the bureau as well. And and so I think it's quite interesting to see that approach, the nature that it has to also somehow fit within the plan too. Yeah, um, yeah. So how would you say, how would you see Meerstad kind of develop into the future also in regards to nature and kind of also the nature based solutions as well within that.

Speaker 1 [00:21:46] And one thing with nature that is important that you're connecting. Nature Reserves. Hmm. And that population also can travel from one place to another place. Yeah. So

we have a lot of zones and other measures in order to get the free movement of all of those species possible. Yeah.

Speaker 2 [00:22:11] Like the fish as well.

Speaker 1 [00:22:12] Like the fish. But we have also for the frogs too. Yeah. we have volunteers. So there are many measures there and I think that they'll be increased. Um, we will look to have more Green within the city. But that is a contradiction because we have also the underground infrastructure. Which is increasing and trees and they are infrastructure are not friends.

Speaker 2 [00:22:48] Yeah.

Speaker 1 [00:22:49] That's okay. You have to sort of be matter of fact actually you need a lot of, of space to make it. And the other hand, if you have all wide roads and, uh, big avenues. It's not the city which they are used to, they are used to more freedom, they are delighted as it's friendly. So there we have to find a balance. So what you will see. I think that there will be more clusters of housing and around clusters and between the clusters will be green connections. The mobility of people is changing. And that's the issue about what can we expect about mobility in the in the future depends also what to what the government is doing. For instance, we have no good connections to, uh, to a fast train system.

Speaker 2 [00:23:52] Mm. Yeah. The North-South connection as well I think like Zwolle and Groningen as well. That's kind of always been in the plans. Okay, maybe a faster train line but nothings really happened.

Speaker 1 [00:24:05] Maybe going to do this, maybe going to do that. Yeah, because I'm convinced if we make a good connection to the rest of Holland with fast trains to Germany. Yeah because we have also and moving there and scandinavia. Yes. So it's it's going to be and then there will be another mindset I think about having their own car and the mobility, sharing mobility is getting more and more common. Mhm. Oh I have no idea how fast that will develop it I'm sure it will affect on how we are going to develop our cities and our communities because our car is, it's so important so we have made so many uh doing so many things to make the car possible, to have it and park it and to achieve that security. But so then I think it will be a change, you know, due to the change in mobility cities will change. That will change, but it what affect and how fast it's difficult to see. Yeah. But um, what we see is, and that's of course the wealth that we have and I don't know how much we can afford. Living and living in a way we are living building in Meerstad and it means that it's what people like we see that. But we realize also that it is almost we are getting towards dividing our population again. I mean, in Meerstad you need a certain income to, you know, to be able to live in Meerstad. And there is a quite a number of people who can't afford it. And we did something which which has to be reconsidered. Yeah. And that I know from the government, from the town. Orders, to have at least in some places, 30% social living. So we have to integrate that social living within and that also affect how the whole city will be developed in the future.

Speaker 2 [00:26:33] Yeah. And I actually had a conversation with another resident who was part of one of the neighborhood groups, and he did mention that it is become exclusive as well, considering the size of the houses and how much it cost to build. Here is a bit of a barrier, especially people that have lower incomes. And he did say that there is a bit of a need to have more of an integration of that.

Speaker 1 [00:26:55] As far as we are going, we are getting too much, I think, in America. Its like this idea that the rich and the poor and.

Speaker 2 [00:27:05] I think a big difference in the US is.

Speaker 1 [00:27:07] That we don't want.

Speaker 2 [00:27:07] Oh no, it's, it's, it's the result of that. Not very good I can tell you. And there especially there's even gated communities and that's something that I've never seen in the Netherlands, where you have, you know, public utilities kind of serving a private area.

Speaker 1 [00:27:23] Sunshine city.

Speaker 2 [00:27:24] Yeah. Yeah. And I mean firsthand even I've experienced this car dependency of not being able to kind of participate in society without a car. So I think that's definitely something that personally I think should be avoided. And, you know, it's interesting to see how the Dutch perspective changes and in relation to nature and how those cities are going to change.

Speaker 1 [00:27:44] Yeah.

Speaker 2 [00:27:45] Especially since you.

Speaker 1 [00:27:46] Do have to sort of prove that if yeah. If you mix the population more that the children growing up in the city and uh, and the poor but of, of the, of the community to uh, are getting up and then living within an area where everything is not average, but you can feel themselves and you know. They are they are more aiming for schooling. They are more looking forward to also being being part of that. That makes it difficult.

Speaker 2 [00:28:22] Yeah, definitely. Um, so how has it been working with resident groups within the neighborhood?

Speaker 1 [00:28:32] In general. It's fun to do. Yeah. But you have to realize always that it's impossible to have to satisfy everybody. Mhm. And you have to be keen on the fact that there is a certain group of people who always are indifferent and trying to bring up their issues and you have to listen to them, but you have also to listen to the people who don't. Yeah. And to get to the base. Otherwise you are getting too much. And and even if you're getting to talk too much to

a certain group of to a certain person, they are feeling more. I can arrange it. They are acting like a mayor of a certain area. Yeah. And that is something which you have to be aware of. So talking to people, it's nice to do. It is good to do. But you have always to look around you , in a way, why that group is so silent and why this group is not. They are so, uh, in the front. And what do they want? And that's something. Yeah, it is. You are, you are obliged to not to accept too fast all comments that are coming in. But you have to filter them and put it in the right perspective and and play with it.

Speaker 2 [00:30:21] So how could you maybe get more of an interaction with those people that aren't heard and aren't really involved as much? Because that's also a bit of a process, maybe to see what those people would like to see done in the neighborhood, not just the loudest voices, but also those who have maybe don't have as much of an influence.

Speaker 1 [00:30:41] Yeah, you get it. The only way to get the information is to go among the people.

Speaker 2 [00:30:49] Yeah.

Speaker 1 [00:30:50] You have to listen to them in their own surrounding, their own. Where they are feeling safe and then have a talk with them, we call it a kitchen talk.

Speaker 2 [00:31:04] Yeah.

Speaker 1 [00:31:05] Face one, two, one. Hey, if you don't hear from you, but is there something is bothering you or certain things that you think maybe that's better and then sometimes we hear from them. I but then we are not hearing from them because they are there and they have also a big mouth and yeah, they don't like that. And so you have to go into the community to hear what's what's going on and trying to fit to that and trying to bring that into the right program. Yeah.

Speaker 2 [00:31:37] I also have my own experience with that. Also just going around in the neighborhood door to door, like giving out my surveys as well. So within my research, I'm combining interviews with the surveys to kind of get a good perspective on everything that's happening in the neighborhood from all angles. So I think was quite interesting. Some people were completely not interested in like, Oh no, but for the most part I had a lot of luck, like a lot of people were quite interested in it. They said, Oh, so like, what's your research about? And some people said, Oh, okay, you're doing it about this. Yes, I have a lot of opinions. I want to I want to voice them. So I had a lot of kind of elements I never even thought about before, like until after I went among people. Yeah. So I even had people talking about the reeds for instance, one woman, she even said, Oh, we need bridges because the islands, it's isolated, we want more connections with our neighbors. You know, other residents also said something along the lines of, okay, we need better public spaces and more places for us to gather.

Speaker 1 [00:32:34] And someone who is doing a lot of sailing and those kind of things saying yeah, oh, no, no, no more bridges. Yeah.

Speaker 2 [00:32:41] Yeah. I think one of my favorite kind of things that I kind of realized and talked about was, well, also about the public space and and specifically about like nature based solutions. And nature was that the lake becomes kind of a social space as well. You have people doing like suppin and their boats and it becomes almost like a city square. Yeah. So I think it also seems like a quite a big benefit for the residents as well.

Speaker 1 [00:33:10] Yeah, and there was a question from people in general. It means that we ought to have a beach.

Speaker 2 [00:33:19] Oh yeah. I also get that comment as well.

Speaker 1 [00:33:23] And then we planned to beach and tried to do it this nice in a way to the to don't bother other people. But then still there were some islands nearby and people start to complain. We don't want it to be too loud night and that will happen and what must be done. Yeah. There are always there are.

Speaker 2 [00:33:50] Different ways to do so. But actually I did pass on the way here. It did seem like there was a bit of a beach as well.

Speaker 1 [00:33:57] Yeah, yeah.

Speaker 2 [00:33:58] Yeah.

Speaker 1 [00:33:59] But the park and that was a big issue.

Speaker 2 [00:34:02] It wasn't a.

Speaker 1 [00:34:03] Problem from, from from people living on the island. They said we don't want it.

Speaker 2 [00:34:08] So it's also like a process of getting that consensus.

Speaker 1 [00:34:12] You know as they say in America, not in my backyard.

Speaker 2 [00:34:15] Oh, good.

Speaker 1 [00:34:15] They like everything and you want everything. But as soon as its coming nearby, they don't want it anymore.

Speaker 2 [00:34:22] No, definitely. And I think also maybe the Netherlands has a bit of a social awareness of people other than yourself as well. And sometimes I think you do have more of a

willingness to kind of compromise within the Netherlands that I've observed personally, as opposed to the US, where you kind of have this, okay, this is my my castle, my piece of land and kind of, you know.

Speaker 1 [00:34:42] Yeah, right. Yeah. when you have more space you are able to do that.

Speaker 2 [00:34:44] Exactly. It's also a space constraint for sure. Um, yeah. Would you like to add anything else about nature based solutions and like citizen involvement within the neighborhood? Do you have anything that maybe I haven't covered?

Speaker 1 [00:34:59] No. I think in general you have covered everything.

Speaker 2 [00:35:01] Yeah. Yeah. So would you recommend anybody else I should talk to? Like to maybe get more information, like a wider perspective about the neighborhood?

Speaker 1 [00:35:14] Um, do you have Jonas Feldman on your list?

Speaker 2 [00:35:19] Uh, no, I don't.

Speaker 1 [00:35:23] He's part of our organization, and he is the project manager for the development, and he has had a lot of talks recently with people so maybe he could give you some more information.

Speaker 2 [00:35:38] Um, I'm not sure if my, if you guys have my email, if you could send an email with like the contact information and these.

Speaker 1 [00:35:48] Ah you want the easy way.

Speaker 2 [00:35:49] Or I can write down.

Speaker 1 [00:35:52] Yes, here is my card.

Speaker 2 [00:35:52] Yeah. And I guess in conclusion. Do you have any questions for me about my research or.

Unidentified [00:37:23]

Speaker 2 [00:37:49] Okay. Thank you.

Speaker 1 [00:37:54] Questions? When are you going to finalize your research?

Speaker 2 [00:38:02] So my first deadline is the 20th and that's when we have a peer review process. Yes. So it's very soon. So I'm going to be collecting a little bit more data and then I will

be analyzing it. And then I have my first draft. Okay. But I should be finalizing within the next month or two. Something like this. Okay.

Speaker 1 [00:38:23] And then next.

Speaker 2 [00:38:25] Hopefully pass my thesis.

Speaker 1 [00:38:29] And then back to America.

Speaker 2 [00:38:32] No, I'd actually like to do a master's degree also in Europe.

Speaker 1 [00:38:34] So you stay.

Speaker 2 [00:38:36] Yes, I would like to stay there. Well, that concludes my interview. Thank you so much for your time. I think I've got a lot of information.

Speaker 1 [00:38:46] Pleasure, and I wish you good luck.

Appendix I (Dorpsbelangen Transcript):

Dorpsbelangen.m4a

Speaker 1 [00:00:03] Okay. Yes. So my first question, how did your interest group form and how long has it been actively involved with bureau Meerstad.

Speaker 2 [00:00:15] Dorpsbelangen started two and a half years ago of and was originated by six ladies who who had all kinds of local neighborhood kind of activity things happening. So they bundled that together and then they made a Dorpsbelangen and that's two and a half years ago. And half year later I didn't know they gave it or they they started. And I asked myself, okay, how is the development now going on going here in Meerstad? I saw a lot, a lot of what is happening. So I asked them about Bureau Meerstad. So who is talking on behalf of the people here? And they said, well, that's funny that you say that, just start of Dorpsbelangen. So that's why I joined them. And I joined them in particularly to, to look at the developments and proposals from, you know Bureau Meerstad.

Speaker 1 [00:01:25] So so how have Bureau Meerstad and local authorities involved citizens in the past?

Speaker 2 [00:01:33] They. They did that in 2005 pretty extensively. Mm hmm. That's quite a mixed amount of. Yeah. Tables to call it. Mm hmm. Yeah. Discussion tables, dialog tables. And so. And that died a little bit because of the initial slump we had in the building market or under the bank crisis. And so they, uh, then it slowed down a little bit and then it started going through confusion because. Because I, but I look at it, that's still a plan of 2005. But meantime, the local council had all kinds of new visionaries about energy, sustainability and transport, and they were not matching that mixed properly or that didn't match anymore. So. So I argued, I said, I don't know what the plan is anymore. What what's the overall intent of this area? So they found that out themselves as well. But in the other side was that now we have a new law as well, which you still have Omgevingsvet.

Speaker 1 [00:02:57] Mm hmm. Yeah.

Speaker 2 [00:02:59] Yeah. So they need to revitalize all those little bestemmingsplannen we call them. They have to revitalize them into. And so that happened to the same time. And then they said, okay, let's then do a big participation exercise again.

Speaker 1 [00:03:17] Yeah. So how has the neighborhood changed since the initial 2005 plan?

Speaker 2 [00:03:23] How it changed?

Speaker 1 [00:03:24] Yeah. How has it changed since the initial kind of inception of the plan versus what you see today?

Speaker 2 [00:03:29] Quite a lot. I mean, there are four things, big things which happened. The lake is, is now, uh, it's going to be two thirds of what it will be originally planned.

Speaker 1 [00:03:42] Yeah.

Speaker 2 [00:03:43] They originally planned to have 10,000, 12,000 houses, and now it's about 8000. Mm hmm. And they took a large chunk out of the development, and they're making the sun solar panel field.

Speaker 1 [00:04:02] Yeah.

Speaker 2 [00:04:03] And the Hyperloop. Yeah, those. Those are two big, biggest changes, if you like. And of course, hrkstedebrukplannen, which is an, uh, forest, that will remain intact.

Speaker 1 [00:04:16] Yeah. Yeah. Okay. Um, so as someone that's kind of become a spokesperson for the neighborhood and kind of what citizens within the neighborhood would like, what would you say are kind of the highest priorities for citizens at the moment? Mm hmm.

Speaker 2 [00:04:35] The highest priorities for the neighborhood is safe traffic route routes. Yeah. Because a lot more house has a lot more people, a lot more car transport. So we want to maintain that those are safe. We want to make sure there's enough schools.

Speaker 1 [00:04:56] Or.

Speaker 2 [00:04:56] On time as well.

Speaker 1 [00:04:58] Yes.

Speaker 2 [00:04:58] Because you have now all schools around, you know, and temporary buildings. The other one is we like to have shops and things like that and.

Speaker 1 [00:05:11] Yeah, yeah.

Speaker 2 [00:05:12] And the last thing is that we want to have and that doesn't mean that in that order we want to have nature where we can recreate, where we can enjoy ourselves and then as well just justice to the culture historical background of this place. Yeah.

Speaker 1 [00:05:34] Yeah. So what would so you mentioned the nature. So what role would you say nature plays within Meerstad and how does it impact residents?

Speaker 2 [00:05:44] Mm hmm. Mm hmm. So that is pretty. The whole development is pretty spacious. You know, says a lot. A lot of large land slots. Yeah. Relatively. Yes. The Netherlands. Not in the States, but. And so that's. And they they originally the intention of the plan was a third water, a third houses, and a third nature.

Speaker 1 [00:06:16] Mm hmm.

Speaker 2 [00:06:17] Yeah. And they are letting that third of nature now go a little bit. Hmm. Yeah. The water is still there, the house as well, but eventually goes down a bit because they need to build cheaper houses. So you kind of. Then you need to make it on the smaller scale.

Speaker 1 [00:06:36] Yeah. Yeah. Actually, with the discussions with the Bureau as well, they said there are certain they have been trying to do things, for instance, like having a kind of holes in the locks for like fish to migrate as well and trying to connect this nature while also trying to keep the neighborhood profitable and keep building housing as well. And actually, with another interview with the local landscape architect, she mentioned that there was some trees that were growing that were not within the plan and then were cut down, actually. So I actually asked about this as well. So how does that work in terms of biodiversity and incorporating nature if it's not necessarily in the plan? And they did mention that, for instance, there is a lot of like underground infrastructure and that is quite difficult to kind of mix that together as well. So, I mean, do you have any thoughts on this?

Speaker 2 [00:07:27] Well, you're absolutely right that the diversity in the plans are so so I'm a I, I think they're looking at it from an option of of make it green rather than nature. Okay. And there's a big difference between it. Each of these is what can sustain itself and has diversity within and green making the neighborhood green. That's what they do.

Speaker 1 [00:07:53] Okay. Yeah. So how would you define green, then?

Speaker 2 [00:07:56] Green is lawns. You can mow easy. So easy for maintenance. It is the same trees, same. You know, the monoculture.

Speaker 1 [00:08:07] Yeah.

Speaker 2 [00:08:08] That's it.

Speaker 1 [00:08:09] Yeah, I think it's quite interesting because that landscape architect, she also mentioned that she was kind of created a plan to add reeds to like the islands within Meerstad and how originally the plan was kind of promised to make these reeds despite the fact that it was too deep. The water is in deep enough for these, so it takes quite a process to then add the sand and then create like the structures to make the reeds grow. And even while talking to the Bureau, they did mention that it's a lot of maintenance and maintenance. I think for me that was a bit of a shock as well because in the U.S. there's kind of this view of nature is just something to be kind of at a distance. And here there's that kind of push to integrate.

Speaker 2 [00:08:50] That, you know. But but it's like a back garden. Your back garden you have to maintain because weeds, you know? And so they don't get. They don't get it. Mm hmm. Yeah. And that's what I. Because you can manipulate nature, nature will do its own thing. Yeah. And so you have to move with nature. And that's not what they tried to do. So that's why they have difficulties with it.

Speaker 1 [00:09:14] Yeah.

Speaker 2 [00:09:15] And that's what you see with the reeds. Yeah. And you know, I think that is the fourth time I see a crane there trying to get the island filled a little bit and hopefully that the reeds will grow there. Yeah. Yeah. And it doesn't, it goes where it wants. Yeah. Yeah. And reed is reed. Yeah. So it is a pretty simple thing.

Speaker 1 [00:09:39] Yeah.

Speaker 2 [00:09:40] They can't get it. But why they want that reed is as well important. It's because they want to have clean water.

Speaker 1 [00:09:48] Yeah. The better water quality.

Speaker 2 [00:09:49] Clear water. Mm hmm. So that's why you need to have a filtration unit. Yeah. And that is what the reed is doing. So they. So it's not out of sort of nice for nature the reeds. No. It is another purpose because they promised clean water.

Speaker 1 [00:10:07] Okay. So is not. Not necessarily for the nature itself.

Speaker 2 [00:10:11] No.

Speaker 1 [00:10:12] But more for just other goals.

Speaker 2 [00:10:14] Yeah. For filtration. So that's why. Yeah.

Speaker 1 [00:10:18] Yeah, I understand, because this is one I guess example of a nature based solution of which like I'm doing my research and I guess this is one maybe role for, you know, role of them within the neighborhood. But would you say like there is other roles as well that these solutions could have for citizens or just purely these goals that were only for people? Um.

Speaker 2 [00:10:43] So you try again. Yeah.

Speaker 1 [00:10:44] Sorry. So, you know, would you say that citizens are aware of these nature based solutions, like, for the most part, for instance, the reeds and you have, you know,

for instance, natural drainage. So would you say there's an awareness among citizens about these solutions?

Speaker 2 [00:10:59] Yeah, they they have several presentations held. Several. Presentations every year should. Why about water quality and why? Because of the the weeds, which is grown in the water and then stops the boats. Yeah. Because it goes in the propellers. So if people are complaining, what is this, why are you not.

Speaker 2 [00:11:20] Why are you not, you know, doing something about it?

Speaker 1 [00:11:23] True.

Speaker 2 [00:11:23] So now so they they gave a presentation about how clean the water is and the quality. So it is not from nature, you know motivated. Yeah but it is out of maintenance and recreation.

Speaker 1 [00:11:40] Okay. So more recreation is more seen as the important part for these solutions rather than nature.

Speaker 2 [00:11:48] Nature is only on our condition. Mhm. So that is, that's how I look at it. And they're going to be hurt when I say that. Yeah. But they, I don't get, they don't get that. Uh, yeah, that you do. I So you have one model. One is you make everything green, you know, and on your terms, you've got to fight it. Yeah. Oh, you let it go so you can use it. Yeah. And the other one is nature. Don't you know, don't meddle with it. You can't walk in it, you can't use it. You got, you know, letting it go. Well, somewhere in the middle you need to find yourselves. Yeah.

Speaker 1 [00:12:32] Yeah.

Speaker 2 [00:12:33] And that's difficult.

Speaker 1 [00:12:35] Mhm.

Speaker 2 [00:12:36] That is so you have the purist. Oh there was one a bird there. Oh you cannot develop here because that bird you know?

Speaker 1 [00:12:45] Yeah.

Speaker 2 [00:12:46] Yeah. Yeah. That's, that's, that's what you have here on the other side of Groningen and to find the middle ground. Mhm. But the principle of moving in and with nature is something but I would give them. And how you do that I don't know. Yeah but but so take note of the development now. Yeah. Sorry if I digress.

Speaker 1 [00:13:10] No of course. Just.

Speaker 2 [00:13:11] Yeah. So and so they they they make the plan. They have no doubt made the plan. They showed you the plan already or not?

Speaker 1 [00:13:22] No, they have not. No, no. It was a pretty quick interview and.

Speaker 2 [00:13:27] You can take this with, you know, think. Yeah. So the so yeah, this is the area which is developed more or less. Yeah. So this, this all needs to be and this is existing building site and they want to develop there, there, here they and make a forest if you like. This is the forest I talked about in the planner. So they, the lake is until this far. Mhm. That's like so it still needs to go this big.

Speaker 1 [00:14:02] Mhm. So pretty big expansion plans in the future as well.

Speaker 2 [00:14:04] Well yeah. So the, the lake, the current lake needs to be three times as big.

Speaker 1 [00:14:09] Mhm.

Speaker 2 [00:14:10] To make this size. Yeah. Now so but I said okay now I'm on see your phasing. So when, what are you going to do. Because in 2030 the lake size needs to be ready. Why? Because they, uh, they want to use this as well. When its high tide. Water and rain.

Speaker 1 [00:14:31] Water storage. Yeah.

Speaker 2 [00:14:32] Water storage. Correct. So in 2013 it needs to be ready. I said, Not only do you need to hurry up because you need to have at the nature prepared for that. Yes. And grow trees. And here you want to have between the existing build infrastructure and people. Yeah. They, they said you can build here but we like to have a green zone between it.

Speaker 1 [00:14:59] Yeah.

Speaker 2 [00:15:00] So if you do that then you need to start thinking about it early rather than later. Otherwise you building here finish and then you start doing something like this.

Speaker 1 [00:15:10] Mm hmm. Yeah.

Speaker 2 [00:15:12] Yeah. Okay. And that's the same here. So. So give me the phasing on when you do what? And that is what I miss.

Speaker 1 [00:15:23] Hello.

Speaker 2 [00:15:25] So it's so that is. Wow. Yeah. what they are struggling with because it is not profitable.

Speaker 1 [00:15:32] Yeah. Yeah.

Speaker 2 [00:15:34] So you make this nice park here. Mm. Yeah. Yeah. Yeah. Have you been cycling through?

Speaker 1 [00:15:40] Yes.

Speaker 2 [00:15:41] Okay. Nice. Glowing. No trees, nothing quite empty.

Speaker 1 [00:15:45] Yeah.

Speaker 2 [00:15:45] And why? Because now you can mow it with the tractor easy and maintain it.

Speaker 1 [00:15:51] Yeah. The maintenance. Yeah, it's true. But it does seem like they have made some kind of attempts to connect a little bit with the citizens as well and at least gain some feedback. So how would you say that the citizens feedback has influenced the design?

Speaker 2 [00:16:10] Well, yeah, the complexity is, of course, you have people who are using this area to live in and recreate, using it. Yeah. So they are looking at it. How can I use to my enjoyment this area. Yeah. Not looking at to sustainability or things like that. Then you have the interest group source. But I'm part of saying well hold on you know, make this sustainable. Yeah. And move with nature. And so they, they, they have to do, they've done the participation process. But the question is the, what's the result of it, how will it look like? And how will they act in the good and the bad times? Yeah, and that is the question. So the result of all the efforts that people are mentioning. Yeah. What is the result? What was the outcome? Was it the outcome to get buying from people or what's the outcome? No, we presented it so we hopefully we can go quickly through to the approval process.

Speaker 1 [00:17:18] Well through the process, you know.

Speaker 2 [00:17:20] So. So that is that's my question still. So I'm a bit uh. Yeah.

Speaker 2 [00:17:26] Skeptical still.

Speaker 2 [00:17:28] But healthy. Yeah. But I, I'm fully and just think about how they did it and you know, they have, you know, did it in difficult circumstances. They did a good job.

Speaker 2 [00:17:39] Yeah. Yeah.

Speaker 2 [00:17:41] But the question is how, how, how are they.

Speaker 2 [00:17:46] Getting rid of them. Yeah. Like how is the implementation versus the initial plan and how are they framing it in a sense so.

Speaker 2 [00:17:54] Yeah. Because remember, you know this.

Speaker 2 [00:17:57] Far.

Speaker 2 [00:17:59] The park that was originally with it as well the area as long as like I said the lake was a lot bigger. Yeah. So this was gone. Um, they, uh, they somewhat changed this amount of houses, like I said. But they start from an average 200 hours a year. Now they want to go to 600 houses.

Speaker 1 [00:18:26] Yeah.

Speaker 2 [00:18:27] But when you do that six hundred houses, that's a lot that schools, all of you know, facilities, everything need to go to the same town. That's not how they do it. Yeah, because they sell. Slots? Yes. People build on it. Local council needs to do the school. Mhm. Yeah. And free enterprise people need to start making shops. Yeah. But they do that only after there are enough people.

Speaker 1 [00:18:58] Yeah, that's true.

Speaker 2 [00:18:59] True. So you start here now. An area of a thousand, other 6000 houses. Now they start building. A beautiful, beautiful shop. Yeah, it's the first shop we have. Yeah. And there's no permanent school yet. There's over a 1000 youth here.

Speaker 2 [00:19:20] Yeah.

Speaker 2 [00:19:20] So. So. Uh. Okay. Again, nothing with nature. Yeah, but it's all connected. But I try to explain to you how they are working on the other elements and nature group. They're talking with the nature groups as well. But in the isolation, I said, Why are you not asking me to sit with that? Yeah, because I will be a user of that nature.

Speaker 1 [00:19:46] It's true.

Speaker 2 [00:19:47] And the naturists are the purists and the purists. Today this little forest doesn't have a lot of value. Mhm. Yeah. In the 1980s it's been planted. Mhm. Yeah. The oaks are 30 years old. 40 years old then. But there is in that area because it isn't, hikikker, this one frog. Shallow frog. Yeah. Needs to be protected. Mhm. Yeah. So that is the only thing. So nature. Uh interest area interest group are, you know have the time for it. Yeah. Well I'm coming from the different angle. I said make this something which is interesting because you're going to have 10,000 houses here but 30,000 people and if you make an impact, set participation and educational center here. Yeah, a little one. So you can walk the dog people, the kids from the

schools can do work in the nature. Yeah. Yeah. And so, so they start appreciating nature. Mhm. Yeah. Then rather making it kind of a green desert like this.

Speaker 1 [00:21:15] Yeah.

Speaker 2 [00:21:16] That's a green desert. Yeah.

Speaker 1 [00:21:17] Mhm. Yeah. Definitely. I think there's definitely that role of educating people the value I think because also maybe on some level as you mentioned before, if people only really see it as something to be used, how can this benefit me in that way? Maybe people lack a little bit of awareness of the value of maybe nature for nature sake, and that it can have those benefits outside of just purely recreational or purely for water quality and these kind of specific, you know, elements as well, despite I mean, it is quite difficult, I think in the Netherlands as well to uh, kind of have all these uses together and, and, you know, create something that there's space for because you really have to be smart about it.

Speaker 2 [00:22:01] Yeah. Yeah. You talk about stamp size. Yeah, yeah, yeah. So you need to be smart about it. And that's it. Yeah. Or smart. You be wise about it.

Speaker 1 [00:22:10] Mm.

Speaker 2 [00:22:11] Yes. So I think they think with an intellect and they're smart.

Speaker 2 [00:22:19] You know.

Speaker 2 [00:22:20] They can motivate and inspire people to do something or appreciate something. Yeah. Yeah. Or they can influence nature, but not wise.

Speaker 1 [00:22:30] Yeah.

Speaker 2 [00:22:31] Yeah, yeah. Wisdom. You have a, a different approach.

Speaker 1 [00:22:34] So how could Meerstad, you know, the the bureau, how could they maybe involve citizens a little better?

Speaker 2 [00:22:41] Well, they. Look theres an educational role there as well because a lot citizens don't have this awareness. Awareness. Mhm. Yeah. And, and so it and then you get the answer you want.

Speaker 1 [00:23:04] Yeah.

Speaker 2 [00:23:05] Yeah. Because mostly here are people 30 between 30 and 45 year old. Two kids. Yeah. So they are, they don't have a lot of time. Mhm. Yeah. And they are users.

Speaker 1 [00:23:18] Yeah.

Speaker 2 [00:23:18] Of this place. And I do not see them as passers by as such and that they need to do take care of the surroundings. Yeah. And then the surroundings are here to stay for a very long time.

Speaker 1 [00:23:32] So maybe an element of kind of place attachment plays a role as well? Right. Yeah.

Speaker 2 [00:23:37] So, so. And how do you get that? By explaining to people. What this place is. Where did it come from?

Speaker 1 [00:23:45] Yeah. And building maybe that identity.

Speaker 2 [00:23:47] Identity. Yes, exactly. But people are very interested to know because I, I, I showed them that there used to be a steam, steam pump here to, to, to make this area dry. Yeah. This is on the other side. Yeah, yeah, yeah. And before that farmers had, yeah. This is the, the details of windmills they had standing there. So the type of windmills and there's a whole story about how that was made and how that was done.

Speaker 1 [00:24:23] Yes. That is the historical element as well.

Speaker 2 [00:24:25] And yeah, so that's the education you need to do then. So what why is it important why am I asking this question? Yeah. And that's that's a little bit of what I, what I miss a lot.

Speaker 1 [00:24:37] Yeah, we do, we do have kind of like the planning faculty. We do have this concept called placemaking. Yeah. And this is very, very much kind of something that's on the forefront these days, like talking about it when you're developing new areas, kind of how do you make an area unique and how do you get that placemaking, that that attachment, how you get people to kind of have a connection to this space?

Speaker 2 [00:24:59] Absolutely.

Speaker 1 [00:24:59] You know, and definitely nature can play a role. The history plays a role in it all. Yeah. Just connect within that as well.

Speaker 2 [00:25:06] Connect. So they go into that forest and they're going to make a blog. Oh yeah. That not bureau Meerstad but another. A nature of.

Speaker 1 [00:25:15] Oh, okay.

Speaker 2 [00:25:17] And I'll put that one to put that link in to our site. Yeah. That people can understand this.

Speaker 1 [00:25:24] That's educational as well to that end. So how would maybe citizens use that to develop into the future like what would be maybe a vision on how Meerstad can go forward and grow? Or maybe not grow? Is there something that residents would like to see maybe in the future?

Speaker 2 [00:25:45] Yeah, I did. Well, I'd like to. Yeah, I know. I'd like them to think more about, uh, you know, placemaking.

Speaker 2 [00:25:56] You know, placemaking.

Speaker 2 [00:25:57] Placemaking and invest in that.

Speaker 1 [00:26:00] Okay.

Speaker 2 [00:26:01] Yeah. And that is the setting. And that is all well placed for social and interactive context. Because now you don't have that. There's no facility where you can play cards or, you know, there's. There's just no building here.

Speaker 1 [00:26:20] Yeah. Yeah.

Speaker 2 [00:26:21] Yeah. So. So when you have 10 to 15 year olds, time, then you will have people who have lots of time but no place to go to and no, yeah, yeah. No interaction. So people are living next to each other rather than with each other.

Speaker 1 [00:26:38] Yeah.

Speaker 2 [00:26:39] So, so that there are many aspects, it has some connection with nature and culture. Yeah. And this, this forest, for instance. Yeah. There's, there's something like 20 hectare fields. So why are you not putting the local cows the Groningen cows? Yeah, the original Groningen cows, Lagerfellers and some sheep. And they're all local type. Yeah, just put it there. Because the funny thing is, if you look at the street name. Yeah, the street names are those from Groningen. Oh yeah. Okay.

Speaker 1 [00:27:21] So it does have that connection even. Yeah.

Speaker 2 [00:27:27] Lagerfelleran black op. Those are all cow names, you know, type of cows names, but nobody knows what they are.

Speaker 1 [00:27:35] Bit ironic there I guess.

Speaker 2 [00:27:37] No, that's what I mean. So they think that it's intelligent. They think with a name that you have a connection with. I think it's close to stupid. I don't think they they think it is

nice to do that. Yeah. And I don't think any other spin off of but I think it is. Yeah. Such a dumb thing.

Speaker 1 [00:27:57] Yeah. So maybe there's a disconnect between their history. Yeah.

Speaker 2 [00:28:00] Yeah, they, they, they, they do not see that responsibility.

Speaker 1 [00:28:04] Sure. Yeah. Yeah. Well, is there anything else you'd like to add maybe about, you know, Meerstad or nature based solutions, the neighborhood, the lake? Is there anything maybe I should look into or that I've missed?

Speaker 2 [00:28:23] No, I have. Yeah. Yeah, it is. It is. Yeah, the diversity. Yeah. There's all the same people here, if you like. That's what's missed. Yeah. So they. Yeah. I see that difficulty with the local council who has the the all the expertise, all the knowledge and then you have Bureau Meerstad who's the executioner and the plan maker.

Speaker 1 [00:29:04] Yeah.

Speaker 2 [00:29:04] The plan maker is using some of the resources of the local council. Mm. Yeah. When the plan is finished, local council has a look at it.

Speaker 1 [00:29:14] Mm hmm.

Speaker 2 [00:29:16] They're checking their own work, if you like. Yeah so it's what I see. That's what I see. You know, and the. The people who are going to be living here. Yeah. They invest in, you know, placemaking.

Speaker 1 [00:29:35] Yeah, placemaking for sure. Just creating that identity that way.

Speaker 2 [00:29:39] I do, yes.

Speaker 1 [00:29:41] Well, do you have anybody else I should talk to? Maybe, or somebody that would be willing to do an interview or.

Speaker 2 [00:29:47] Yes, I. Yeah. Oh, yeah. What angle do you want to cover still?

Speaker 1 [00:29:56] Um, just mostly just nature, like the nature aspects, the natural and citizen involvement. These two angles, mostly.

Speaker 2 [00:30:12] Hold on a minute. Yeah. Look. So. So this is a little booklet, book from the area. Okay. And Meerstad is in this as well.

Speaker 1 [00:31:01] Yeah.

Speaker 2 [00:31:03] Yeah. So it is nice, obviously. Mm hmm. Yeah.

Speaker 1 [00:31:13] Well, yeah. Yeah.

Speaker 2 [00:31:15] Yeah. Mm hmm. And this area as well. So it's a wider area.

Speaker 1 [00:31:19] Mm hmm.

Speaker 2 [00:31:20] They look at and they have all kind of woldmeer. Uh. Yeah. So this is. Oh, yeah. That time it like this house was like this and it was about this forest.

Speaker 1 [00:31:43] Mhm.

Speaker 2 [00:31:44] Okay. Well here's Meerstad.

Speaker 2 [00:31:47] Yeah.

Speaker 2 [00:31:48] Yeah. And then he talks about that the forest we talked about. So this guy has been in 1995, he was involved in the original Meerstad building. Yeah. Yeah, he's pretty activist. Yeah. So his, his background is. Let me see. I saw him yesterday evening. I don't know what his title is, actually. Yeah. Let me see. Oh, yeah. He's.

Speaker 1 [00:32:58] Oh, Chronobiology. Oh. Okay. Do you mind if I write it down? He's my university as well!

Speaker 2 [00:33:20] Yeah. Exactly. He was the originator of this nature group.

Speaker 1 [00:33:31] Yeah. Okay. Well, thank you so much.

Speaker 2 [00:33:41] Hey. Yeah. If you want this email address. Mm hmm. Do you have?

Speaker 2 [00:33:46] Oh, yes. Okay. Okay.

Speaker 2 [00:33:48] Oh, yeah. Yeah. Okay. So I think he's. It's because he has more memory, if you like.

Speaker 2 [00:33:57] Yeah. More expertize and background.

Speaker 1 [00:33:59] Absolutely.

Speaker 2 [00:34:00] Yeah.

Speaker 2 [00:34:01] Yeah. And he's been activist as well to keep harstedebrooklandenbos. Yeah. He's been to the highest court in the Netherlands. Against the Bureau Meerstad as well.

Speaker 1 [00:34:14] To keep that intact in nature. Yeah. Spaces.

Speaker 2 [00:34:18] Hmm. Yeah. So. And so. Yeah.

Speaker 1 [00:34:23] Okay. Well, in that case, this concludes our interview. Thank you so much for your time. And thank you for your inputs about Meerstad, local residents and where Meerstad is going in the future.

Speaker 2 [00:34:33] Yeah, you're welcome.

Speaker 1 [00:34:34] Thank you so much.

Appendix J (Landscape Architect Transcript):

Landscape architect.m4a

Speaker 1 [00:00:01] Okay. Hello. I am beginning the first interview of my research in start for my thesis. So the first case we have is a landscape architect that was involved in the Newstead Project. So the first question is, when did you begin your involvement, involvement in the Meerstad project?

Speaker 2 [00:00:19] Well, I guess you have a wrong entrance here. I have not been involved in the big Meerstad project. I came to live here a little more than two years ago, and I have been involved in reshaping the areas that were supposed to contain reeds but contained nothing and had no breakers against the waves, especially with eastern wind. And I did a project together with a neighbor who lives also on a houseboat, a couple of ships south. And we, together with the project bureau, got around to having a good plan made. And actually we're seeing results. The first reeds are growing. There are other birds. New birds have come here, one of them being the one of the street name I live in. And they are actually right now around the corner. They are still proceeding with extra work. So that's that's my involvement. It was a I think we worked at this we wrote a short report of a couple of pages and was with photographs. And in 2020, the storm was beginning of February. And I think we handed the report in the end of April or something like that.

Speaker 1 [00:01:53] So how have you how is the design of nature and nature based solutions changed since you've moved into the neighborhood? Um.

Speaker 2 [00:02:11] Repeat the question, please.

Speaker 1 [00:02:12] How has the design of nature and a kind of incorporation of nature within the neighborhood changed since you moved?

Speaker 2 [00:02:19] Well, in the there was a master plan made in 2005 based on the insights of that moment. Then came the building. Uh, the not the the dot. No, the other.

Speaker 1 [00:02:33] The banking crisis.

Speaker 2 [00:02:36] Yeah, the American banking crisis coming over here also affecting the mortgages and affecting house prices. And so this 2005 plan, which they had planned to start executing in 2008, when it was supposed to start, but it couldn't really start because there was no one buying ground. There was no one buying a house. And so they sort of changed the plans around a bit. So they started with the most expensive houses. Mm hmm. Which is what you see around.

Speaker 1 [00:03:08] Yeah.

Speaker 2 [00:03:09] Um, and, um. But the plan they made was accompanied by. I don't know what you call it, a model. You call it the model this little. Yes. Seen it?

Speaker 1 [00:03:20] No, actually, I haven't yet. You haven't? No.

Speaker 2 [00:03:23] You should go, because that's really interesting. My area in that the model I live in, one of the as they're called, Reed Islands. Mm hmm. And they were supposed are supposed and you can see it on the model to totally covered in reeds. And then there's the ships are in the reeds. You know, there are no reeds or hardly any. And and as soon as there is a lot of wind, the waves just destroyed it. Everything. They have been going through it for years. Every time they tried again to build a barrier, etc. Um, the plan has changed in the sense that they were supposed to deliver the this project bureau in principle has a plan and has to imply the plan, make the plan, build the plan and show on a map that they have actually done what they were supposed to do. And then they hand over the soil and everything and the streets and the streetlamps and everything goes to the local council of Groningen. Yeah. Um, they are in the process of this handover, and now they have to prove that they have done what we're supposed to be doing, you know? And it's very difficult for them to prove that these reeds are going to grow. Hmm. So they have taken lots of extra measures. But I'm afraid even though these reeds have. Have a function in cleaning the water. Water purification, yeah. And as habitat for animals, etc., they are not managing that. There is not enough money. So that's how you see what happens. That's the change I have seen is that that first of all, they have this irony grid in their head about these reeds that shouldn't be there. They have tried for ten years while nine it didn't work. And now they take half measures because they only made it less deep in this room. They took half measures. And I guess we'll get reeds on this little dinky thingy. Semi underwater. Mm hmm. But it won't. For the next 40 years, the rest of the area will stay the way it is. The reeds, it's just too deep.

Speaker 1 [00:05:40] Okay.

Speaker 2 [00:05:41] It's a money problem.

Speaker 1 [00:05:42] Yeah.

Speaker 2 [00:05:43] They had to get loads, if you imagine how big this is. And it. Well, it is. Well, three feet deep. Reeds don't grow there. It needs to be one foot up to two, one and a half foot deep. That's where they grow. So if you have to fill this up two feet high, it's tremendous amount of soil. And they would have to go there and it would have to go in between all the ships. They just don't have the money.

Speaker 1 [00:06:10] Yeah, unfortunately, like a budget problem I guess also comes into play.

Speaker 2 [00:06:15] Yeah. Yeah.

Speaker 1 [00:06:16] So what do you think maybe the Bureau Meerstad could do to kind of improve the biodiversity in the area and kind of help this process along?

Speaker 2 [00:06:24] Well, they have they have really tried I mean, the soil they brought has has reeds in them already, which are starting. I see a little green dots here and there. Yeah. So they are starting to grow the big ones you see over there were there already. So it's, it's really this island like this Long Island structure.

Speaker 1 [00:06:44] Yeah.

Speaker 2 [00:06:45] Um, I'm, I don't. Well, I don't know how they could get more money. That's. I mean, that's the big problem. And the other problem is, which they didn't think about is a technical problem. Mm hmm. They bring the soil in a ship. Yeah. Yeah. And they have a ship lying next to it. A one of those flat square things, which can't sail all by itself. Mm hmm. And there's a dragline standing on that. But the arm of the dragline is never long enough to reach the inside of the island.

Speaker 1 [00:07:14] Oh, okay. Yeah.

Speaker 2 [00:07:16] So they had by building that barrier first. They have taken away the possibility of bringing the soil in.

Speaker 1 [00:07:24] Yeah.

Speaker 2 [00:07:25] So if they bring it in now, they have to go through all kinds of difficult construction here. I mean, they could sail there and this was what they could do. They were supposed to fill this dike, which is parallel to the water, was supposed to be going land inwards so the reeds would grow from where they are already. Yeah. Over this thing.

Speaker 1 [00:07:45] So maybe it's a lack of technical expertise and maybe on some level.

Speaker 2 [00:07:48] Well, I think. I think they didn't realize this with the arm. Hmm. For the rest of the plans were good. I mean, I literally got the plans and with an explanation and what they would be doing and their money wise, just not doing it.

Speaker 1 [00:08:05] So definitely the money aspect, money.

Speaker 2 [00:08:07] And there is the technical technicalities of it needing huge amounts of sand.

Speaker 1 [00:08:12] Yeah. Just the material aspect.

Speaker 2 [00:08:15] Yeah.

Speaker 1 [00:08:16] Have you spoken to other residents about this as well?

Speaker 2 [00:08:18] And we have a we have a my neighbor and I, we went for an interview with everyone. Oh, all the boat owners. Okay. And talked with them during Corona time. So with distance. Yeah. Masks and, um, the whole thing. Um, and yeah, you know, it's the way it is with people. There are people who would love to have the reeds. There are people already have some reeds. There are people who don't want them at all.

Speaker 1 [00:08:48] Yeah, of course. Like, you definitely have kind of different impact, like, you know, different opinions on the matter. Yeah.

Speaker 2 [00:08:54] Yeah. And there are people who want to view if if the reeds really grow here, there a lot of the view will be gone.

Speaker 1 [00:09:03] Okay. Yeah. So you have definitely a change, the esthetic value of the local area as well. Yeah. So in your opinion, maybe as a sort of like a professional kind of working with landscape architecture, what do you think maybe is more important within the neighborhood, kind of like provision for like biodiversity? Or would it be maybe keeping the kind of advertised esthetic value.

Speaker 2 [00:09:25] Or the problem is with minds of people? Well, people get used to I mean, you come here. This ship was here as one of the first. These two were the first two ships arriving of the 16. Yeah. You get used to what you have and if it incrementally is changed, you don't notice. Yeah. It's like with his frog and putting a frog in a bucket with water and heating it up, you don't notice it, and then you don't jump out. But if you all of a sudden asked people, would you like the reeds? And that is a shock effect, which they don't want. So I think it's more of that. And, you know, they've lived here for nine years, had the view all the time, and now you're going to ask them? No, they don't want that. They want what they have. They know what it is. And the people who do have reeds right in front of their bedrooms are thrilled because they say there are birds nestling right under my bedroom window. I can just watch into the nest.

Speaker 1 [00:10:24] Yeah. Yeah. So you have the kind of the the value of nature and they see it firsthand. They experience these, you know, benefits from it, you know. So do you think maybe if you communicate this to people and show them the value, do you think you would maybe help them get support.

Speaker 2 [00:10:39] It didn't help at all with these people.

Speaker 1 [00:10:40] Oh, okay. It's very difficult.

Speaker 2 [00:10:42] It's very difficult. I think it's really the shock effect. The people who did have the reeds in front, of course, have seen that grow Yeah. And and so they were part of heating up the frog.

Speaker 1 [00:10:55] Oh, yeah, yeah, yeah. So I guess it is a difficult process to kind of, like, change people's minds and.

Speaker 2 [00:11:04] And and biodiversity is not on everyone's mind. I mean, my neighbor here is, is mad about the birds. She came here and it was being not a birdie. No, she's a real birdie. Okay. These huge glasses to look through. And she knows every birds kind by heart. And and you become that here, too. I mean, that's a growth process if you're open to it. Yes. If you're only here for The View and you're only here for I don't know what having no neighbors.

Speaker 1 [00:11:34] Oh, a difficult as well. I know when I was like collecting data, I actually spoke to some of the residents and one of the complaints was that in the plan, it showed a lot less, a lot less houses and kind of over time, the islands kind of start to fill up. And people said, well, this wasn't exactly what I imagined when I moved in here. And it was kind of a change over the years.

Speaker 2 [00:11:57] And it's not even over the years we've lived here two years. I've seen six or seven houses built all just along this little road to go out.

Speaker 1 [00:12:05] Yeah. So it's quite a big change.

Speaker 2 [00:12:08] Big change that the brown one which you look with the roof there. That wasn't here. Mm. It was an open field. Have you looked at Google Maps? Yes.

Speaker 1 [00:12:16] Yeah, it's quite different.

Speaker 2 [00:12:17] It's quite different. And it's not that long ago.

Speaker 1 [00:12:20] It's true. Yeah. And I remember you mentioned when I first was collecting data we met you mentioned that some trees started coming up in the area and the city, the the bureau, they removed it because it wasn't in the plan. Mhm. So kind of what are your thoughts about that. And you know this kind of planning in a way where if nature isn't within the plan, if it doesn't fit that it's removed.

Speaker 2 [00:12:44] Yeah, it's silly. Of course the other side is and they're correct about that if these trees fall over. Mhm. And ruin your shed, it's their fault.

Speaker 1 [00:12:56] Uh, okay.

Speaker 2 [00:12:57] They're liable.

Speaker 1 [00:12:58] So it's a liability problem.

Speaker 2 [00:13:00] Also a legal and a liability problem. There's a lot of that here. I mean, these we all have solar panels.

Speaker 1 [00:13:08] Yeah.

Speaker 2 [00:13:09] We, we can't load our car. If we have an electric car, we cannot load it. Oh, because we're officially not allowed to drive here with a car. We have arranged in such a way that we do it illegally. Yeah, we can take this pull out. It looks totally legal, but we can take pull it out.

Speaker 1 [00:13:29] Okay.

Speaker 2 [00:13:29] And then. But we can't load the car. And they had made a direct line from their sheds to the parking lot in order to load their car. And then the project bureau came and said, we cannot allow this because it's private property. On government property, it's it's a risk if they come to children, they put their fingers in there and they die. Who is the one who is to blame?

Speaker 1 [00:13:57] Yeah.

Speaker 2 [00:13:59] So you get this whole legal thing. Yeah. And at the other side, we are all forced to have solar panels. We are all expected to be energy neutral. Um, and if we want to expand that and also drive around energy neutral, it's impossible unless we go to one of the governmental poles and yeah. And pay money in order to get it, whereas we are already producing I'm producing a thousand kilowatt hour more per year and then I have that I need.

Speaker 1 [00:14:32] So do you think maybe if there was a bit better communication interaction with the bureau?

Speaker 2 [00:14:37] I know it's a law saying these guys were told that they were totally understanding of what we wanted and why we wanted it. And and, of course, that had made total sense. And they cannot allow it because they're liable. So there needs to become a big inter-governmental or I don't know where or the local council or where. Mm. Thing to figure out a way to organize this. It's just a matter of organizing, maybe having good poles. Which you lock with your key. Yeah.

Speaker 1 [00:15:07] Just as a governance problem. More than maybe like a citizen involvement problem. Yeah.

Speaker 2 [00:15:11] At this point, yeah.

Speaker 1 [00:15:12] Okay.

Speaker 2 [00:15:13] But it is. They know.

Speaker 1 [00:15:15] Yeah.

Speaker 2 [00:15:15] So there's one person you'll notice if you go left here. The first park, they have this long parking at your left. The first one has in the bushes. Mm hmm. Yeah. A little wooden pole. Okay. With a lock. And he refuses to remove it. He says unless you organize it local council, unless you organize it. I'm going to go on doing this and I'm not going to your pole and pay money for the electricity I make myself.

Speaker 1 [00:15:43] I'm guessing that the the kind of centralized location also is from like the grid, correct? Yes. And it's not from like solar panels and not really sure if it's not sustainable either.

Speaker 2 [00:15:54] No, no, no, it's not. And you don't know where it comes from? Of course not. Yeah. And there is already with this one pole, there are a six or eight cars which have to make use of it six, six cars and it takes 6 hours to load one car. So we phone, each other "it's all I'm done, you can come" and they have to organize that in order to to stay loaded, which is ridiculous if you have your own electricity.

Speaker 1 [00:16:16] Yeah.

Speaker 2 [00:16:17] So there's there is I think the people of the lot of the project bureau were very aware of what's going on and are impotent in a way. Yeah. Just like we are impotent in a way, unless we do stuff which of which you think like bringing the risk for these kids.

Speaker 1 [00:16:36] Yeah. You know, it's a difficult situation then to have that kind of dialog and seeing what's needed and how to get what residents need.

Speaker 2 [00:16:45] And then it then it would take another project specifically to bring together the lawmakers, the environmental stuff and really make a project that I could yeah, I could do that. I could write a report and put as soon as you put something to paper. Mm hmm. That's when the power starts. Okay. As long as we go to go and protest and write emails, that stuff doesn't work.

Speaker 1 [00:17:09] So soon as it. In the plan. It's something conceived. Then that's when the process begins.

Speaker 2 [00:17:16] When someone writes it down and puts it on paper with it, with a nice look to it, then you'll have it on your desk. You cannot just undo this email. It's there. You have to deliberately pick it up, put it in the garbage.

Speaker 1 [00:17:30] Yeah, you have to acknowledge it. Yeah. I actually had a very interesting conversation with another resident and he's part of one of the citizen interest groups. And he even mentioned to me that they kind of sent around a survey to kind of see what residents were feeling about additions to the neighborhood. And he said that one of the things that was maybe

needed was maybe a place for residents to meet like some kind of community center. So what are your thoughts on that maybe?

Speaker 2 [00:17:54] Yeah, well, part of that it will probably come, but it will come in the area where the density is higher. Okay. It won't be here. And they are making a new master plan, as you know. And and I guess there will there will be something at some point that will offer the possibility. The other thing is we are all import. We are not local farmers who have moved to a house like this. Yeah. Yeah, I come from the other side of the country. Mm hmm. And but most of my neighbors come from the province, so that's not that far. And there is nothing binding us here except that we live here. Okay. Yeah.

Speaker 1 [00:18:39] So it's still like a process of creating the community in the neighborhood.

Speaker 2 [00:18:42] Absolutely. And and people with a high income are not that community oriented. And we don't have the whole charity thing. The United States is very good at the whole church thing. Yeah. I mean, as far as I remember in the United States, if you have no religion, you are expected to be part of the devil sort of. Yeah, you know, it's sort of like you don't believe in Jesus or in God. I don't know which then then then you must be of the other party and bad.

Speaker 1 [00:19:17] Yeah.

Speaker 2 [00:19:18] Whereas there is that kind of, of community cohesion. Cohesion is just not here.

Speaker 1 [00:19:27] So how do you think maybe would be a good way to kind of create more of that and maybe bind the neighborhood together?

Speaker 2 [00:19:33] Do you want that is the first question.

Speaker 1 [00:19:35] That is also a good question as well.

Speaker 2 [00:19:40] We have a party actually, we have a party in June. Okay. You see, I'm a COVID generation. Yeah, I haven't experienced any of that. But apparently we have one party with these three islands together. We have a party twice a year. Yeah. And the first addition which I will be at is in June near the longest day. Yeah. And that can bring some cohesion. I also don't feel a lack of cohesion because I am this COVID.

Speaker 1 [00:20:06] Because you moved in during this time in the pandemic. So it's maybe a bit disconnected.

Speaker 2 [00:20:11] I mean, the first days you were still allowed to shake a hand.

Speaker 1 [00:20:14] Yeah.

Speaker 2 [00:20:15] And that was gone. So it was always this sort of. Yeah, long distance greeting. And and so I may have a more a less cohesive image of the whole, you know, than is actually true.

Speaker 1 [00:20:30] So how do you think maybe nature can come into play and nature based solutions, for instance, parks in areas that, you know, could serve as like ecological initiatives. How do you think maybe that can influence the neighborhood and people and their connections?

Speaker 2 [00:20:45] Well, the nature based park is right there. Yeah, yeah. The water. Yeah. And people do get together on the water. They they have little boats. They they go up sailing, they encounter each other. Yeah. So there is as far as I can see, everyone has a boat except us. But that is where the, where the social meeting happens. And, and also on the streets, if you had come here Koningsdag you would have noticed all the orange flags in that street. And in the other street, our street doesn't do it but other one does.

Speaker 1 [00:21:22] Oh.

Speaker 2 [00:21:24] I think they have more fun in actually bringing on what do you call these.

Speaker 1 [00:21:31] The islands or the. Yeah, the garlands.

Speaker 2 [00:21:35] Garlands. Yeah. They have more fun in putting it on. It's like, like decorating the Christmas tree but then decorating the Koningsdag streets. I don't ever see them do anything underneath the garlands, but they're there.

Speaker 1 [00:21:49] But they're there for decoration. So do you think so. Water is kind of the binding factor. The binding factor. The most important thing for residents then. Yeah.

Speaker 2 [00:21:58] And everyone has a sup, a standing up paddleboard.

Speaker 1 [00:22:01] Yes. Yeah.

Speaker 2 [00:22:02] And so they that they move from one ship to the other, have go and have tea with each other. So that's I guess. In the layout of this plan. It makes sense. It's not called Meerstad for nothing.

Speaker 1 [00:22:14] Exactly. So it becomes kind of like a public space.

Speaker 2 [00:22:17] Yeah.

Speaker 1 [00:22:18] That's quite interesting, I think.

Speaker 2 [00:22:20] Yeah.

Speaker 1 [00:22:22] So how, how do you envision maybe Meerstad in the future, like in your opinion, like how could Meerstad kind of go forward? Like how do you think it would develop over the years because it's still in construction as well.

Speaker 2 [00:22:33] Yeah, I was, I'm also part of that, that group. Um, well, money wise, I realized that they need to build more houses. Yeah, and there is more. More soil. What do you call those birds.

Speaker 1 [00:22:50] Which aren't that. Oh, it's a duck.

Speaker 2 [00:22:52] No. Oh you don't know.

Speaker 1 [00:22:53] Oh I don't know exactly. No.

Speaker 2 [00:22:55] I know very well what I want to know in English. I think it's a loon in English.

Speaker 1 [00:23:00] Oh, yeah, actually, yeah. Yeah, it is a Loon.

Speaker 2 [00:23:02] Yeah. It carries the young on their back.

Speaker 1 [00:23:04] Yeah, yeah, yeah.

Speaker 2 [00:23:08] Um, what do you imagine? What was the.

Speaker 1 [00:23:12] Question? Yeah. How do you imagine Meerstad changing into the future?

Speaker 2 [00:23:21] I as a as a very it's interesting there's really a schism in my landscape architecture feel and the citizen feel, as a citizen there is this like I said, this frog frog thing going on. Yeah. And the houses, they're, they're building new houses every week and new house is built at the other side. Yeah. So I see them encroaching on this, on this more or less natural. I mean Holland has no natural soil at all anywhere but on this sort of natural terrain.

Speaker 1 [00:23:59] Yeah.

Speaker 2 [00:24:01] And, and every time a new house comes up ima bit upset. Yeah. The other side is that the landscape architect says, yeah, sure, but it needs to be paid. All of it needs to be paid. It's true. And there is a huge apparatus there in this ship for the project.

Speaker 1 [00:24:20] Yes.

Speaker 2 [00:24:21] And most people informing and landscape architects driving around in lotus cars. And I don't know what I thought, that's all one of those guys and highly paid people

and lots of high paid people who have to be paid, who are working at this and and the whole apparatus, the whole thing needs to come in and people in Groningen want to live somewhere.

Speaker 1 [00:24:44] Yeah, of course. So it's maybe difficult to kind of sometimes bring together what the needs of citizens are and integrate that with nature and also at the same time make the neighborhood financially viable. Also quite difficult.

Speaker 2 [00:24:57] Yeah, yeah. So I guess it will be there will be some say, oh, there will certainly be segregation. The North let me see far to the northeast of the of the new lake, which is three times as big as now, will have a nature area. Um, but already they're discussing like, is it okay to have a bicycle path from that. Okay through so there you get this the potential interwovenness. This is already going into segregation. Yeah. The other side, of course, being that these people on the bicycle don't always stay on their bicycle. Yeah, yeah. And they go and sit down next to the road and they drop their beer cans or whatever and they'll there will be use using dope over there.

Speaker 1 [00:25:47] Yeah.

Speaker 2 [00:25:47] Difficult the way it is. The way people are.

Speaker 1 [00:25:51] Yeah, of course it's like the, the plan versus how people experience the space and how they use it and how that changes.

Speaker 2 [00:25:56] And how people, how each individual is made up inside the head, like, do I drop my cans or do I take them home? So that should it's seems like a minor decision, but 100 people not taking them home is 100 cans more, of course. And if they drink quickly it's more.

Speaker 1 [00:26:19] Yes. So as a landscape architect. If you could add something to the neighborhood, just if you had to take all considerations away.

Speaker 2 [00:26:27] My my my wand. My magic wand.

Speaker 1 [00:26:29] Yes, your magic wand. What's the the best case scenario? Just if you had free range, is there something you'd like to change in the neighborhood? If you could.

Speaker 2 [00:26:43] And in the neighborhood. You mean that what has been built already?

Speaker 1 [00:26:47] Oh, just as a in relation to like nature and nature based solutions, something you could you believe that would really make a difference in the neighborhood, something that you think would really add to it?

Speaker 2 [00:26:57] Well, I guess some of it would be information because I notice stuff like this. Segregation of the two kinds of sewage. Yeah. Clean sewage and the dirty sewage, I think

one is called greywater. And yes, I don't remember. And there is a lot of all the the rain pipes, etc., all add to the water in the area. And I think people are not aware of that. Oh.

Speaker 1 [00:27:27] Okay. So maybe more information.

Speaker 2 [00:27:29] Or information to enhance pride.

Speaker 1 [00:27:31] Yeah.

Speaker 2 [00:27:32] To, to, to to be aware of that. And maybe I mean, I'm I'm still trying together with that same neighbor to come to make it a place with flower bulbs so that the bees have more chance of surviving winter.

Speaker 1 [00:27:49] Pollination as well.

Speaker 2 [00:27:51] Yea pollination. But certainly just having having the stuff to eat this yellow pollen.

Speaker 1 [00:28:00] Yes. Yes.

Speaker 2 [00:28:01] And and so we had a plan when we did manage to get it get it done. But still, we have hedges everywhere and ask everyone whether they want to buy cheap flower bulbs. I come from the flower bulb country so I can go there and buy multiple flower bulbs for just €1. And if I buy in bulk, I can probably get for even less.

Speaker 1 [00:28:21] Yeah.

Speaker 2 [00:28:22] And to plant flower bulbs under all the hedges, which are barren any way in winter. Yeah, it will be warm and then they will warm up. The flower bulbs will come and by the time the shrubs are there the flower bulbs are done anyway. Yeah.

Speaker 1 [00:28:36] It's quite a nice idea. I think as is the citizen initiative. Maybe something the planners wouldn't even have thought of. No, but you know, due to your experience as well, it can enhance the neighborhood and kind of show people like how they can maybe improve there.

Speaker 2 [00:28:49] And it might be very nice. I mean, we have a.

Speaker 1 [00:28:52] .

Speaker 2 [00:28:53] So that would be one of the things we are working on. But again, I'm aware of the fact that I shouldn't just drop it at the project bureau of course, but make a project out of it and have a comparison to I don't know, have you been to any manors or big historic houses yet?

Speaker 1 [00:29:12] I think I have. Yeah. There was one in the Green area. I can't remember exactly where it was, but I have been to one and it's.

Speaker 2 [00:29:17] And it's interesting thing is that those houses which from 1700 and so on and part of the colonial system and exploitation and so on, these people had loads of money and they imported tulips from Turkey and um, what do you call those different snowdrops and other stuff. And because they, these places are so old and maintained so long, these bulbs multiply and multiply. And in spring it's a whole bed of hyacinths. Or a whole bed of, of snowdrops. But of course these flowers don't know where the borders are of these. Yeah. So they, they sort of go through the entire countryside. So that was my dream that I put that as a theory behind it, you know, and, and I'm very good at polishing language.

Speaker 1 [00:30:11] That's a very nice kind of thought, though, about how to improve it.

Speaker 2 [00:30:14] Yeah, it is.

Speaker 1 [00:30:16] Well, is there anything else you'd like to add about the neighborhood nature based solutions? Maybe citizen involvement? Is there anything else?

Speaker 2 [00:30:26] What I would really like is if the lights were out at night.

Speaker 1 [00:30:30] Oh, okay. So the lights out.

Speaker 2 [00:30:33] It's very interesting. I mean, as you get older, you pee at night.

Speaker 1 [00:30:38] Yeah.

Speaker 2 [00:30:40] And from the glass house to the right, these people have lights standing next to the water. Yeah. And the. The one with the pyramid. Hmm. Yeah. Now have three turn bulbs, and if it. It's 1:00, 2:00, 3:00, 4:00, 5:00 at night, middle of winter. That stuff is glaring over the water. And from that house, that direction. All houses are black. Mm hmm. And there you can see the intense difference for the night sky. To be able to see the night sky. And having this lake here is a beautiful chance to have a good look at the night sky but you cant.

Speaker 1 [00:31:20] It's quite an interesting perspective as well, because I think we think about what's on the ground so much, but we don't really like to look up necessarily always and take that into account.

Speaker 2 [00:31:28] And and and I realize, I mean, as soon as you're in the city, you don't see yeah, you might see one star that is really powerful, but the rest you don't see but here you can see quite a lot. But these, these people who think they should light their harbor at three in the morning. Yeah. And and they're not out and about every night. I'm quite sure about that. Yeah.

Speaker 1 [00:31:48] So maybe some dialog could help that possibly.

Speaker 2 [00:31:50] Dialog could help or. Yeah, something ought to just extinguish that. Let's say not after 12 at night unless you're gone with your own boat on to the lake and you want to make sure you can get home.

Speaker 1 [00:32:02] Of course, yeah. For like a wayfinding kind of point as well, for safety.

Speaker 2 [00:32:07] For the rest cares?

Speaker 1 [00:32:08] Yeah, that's definitely an interesting kind of aspect. I wouldn't have even thought about it. You know, it's. It's also living within the city. It's quite difficult, I think.

Speaker 2 [00:32:15] Then the night sky is beautiful here in principle. Yes. Yes.

Speaker 1 [00:32:20] Well, thank you so much for your time and this all. Yeah. I mean, if you have anything else you'd like, then maybe.

Speaker 2 [00:32:25] Okay, let's see. I don't need to tell you about the water quality here, which is excellent, at least for Dutch standards. Yeah, it's nothing compared to Swiss Alpine Lakes, of course.

Speaker 1 [00:32:46] But in a different context, of course, you know.

Speaker 2 [00:32:49] Yeah. Um, you know, there's, there is there is a concern. We, of course, because we have so little nature in Holland, we, we have quite some people who are crazy about birds or about whatever. Yeah, we have an otter. We have one otter at least, maybe more. Yeah. And they should not be here. It's too crowded. There are too many people. They should not be here. And there's other other birds. And I'm not a specialist, but whenever I speak to someone who is sort of specialist, they say you can't have a roer dom. That's impossible. Mhm. And I said well you know it's big and it's like a heron and it, it's brownish and it's rounder and it goes and I just see them walking through the reeds the other side in winter. Yeah. Pops over one person. I see that happening and the problem is if there are, um, exceptional these nature freaks. If I'm allowed to say that. Yeah. Have a whole network of alarming people. And we've seen a roerdomp and. Yeah. And we even have national places where you can call in or send an email or whatever so that they go on to count. They start counting the reverse is that all these nature freaks have a link to that website and they come here by car. Oh yes. And, and demolish the niche of where these animals live in doing so. So I keep my mouth shut. I don't tell anyone. I just sit here and I think that's a weird bird. Yeah. And then I ask her, she doesn't blab either, but there is this weird sort of push pull thing with exceptional birds or exceptional animals.

Speaker 1 [00:34:43] Yeah. Where it scarce people tend to kind of maybe grab onto that as well and kind of because it's such a scarce and rare thing. Exactly because of the context, people are maybe like, oh, yes, wow, yes.

Speaker 2 [00:34:57] Let's go and have a look.

Speaker 1 [00:34:59] Yeah, but that's also maybe a reason to also create the habitat for that, you know, and maybe if you spread it out further and kind of like spread these ideas about like, you know, the importance of nature, then it can become maybe more commonplace as well.

Speaker 2 [00:35:12] Yeah. And that and the habitat is apparently there. Mhm. I mean the fact that they made a little sand dike there has brought ploeveren which were seen here in spring and in autumn once or twice. They have been walking up and down this little sandy beach. Yeah. For a week or two weeks already. So it just happens. And we as long as we don't interfere too much and don't go and shout at the bird. Yeah.

Speaker 1 [00:35:44] So just leaving it. Leaving it alone, maybe sometimes could also be a strategy, you know, and be it with like the tree that comes out kind of despite the fact it's not in the plan. And, you know, they have.

Speaker 2 [00:35:56] Chopped them down. By the way, have you have you noticed they're all gone?

Speaker 1 [00:35:59] Oh, wow. Already? So quickly.

Speaker 2 [00:36:02] Yeah, yeah, yeah. Because. Yeah, well, we didn't plan those. Those are also natural. This roll of trees we have is natural, has grown naturally. But we were in the in the process of what do you call them? Topping them.

Speaker 1 [00:36:15] Trimming them?

Speaker 2 [00:36:16] No trimming. It's just taking off some branches. Sure. We, we have these this brand of clotvilhen.

Speaker 1 [00:36:24] Mhm.

Speaker 2 [00:36:25] And you're chopped off and then it's and then it grows from the top and then you can cut it down again and you get this big stool on which the branches, where the branches come out.

Speaker 1 [00:36:37] Cropping.

Speaker 2 [00:36:38] Maybe. I don't know. I really have.

Speaker 1 [00:36:41] To check that.

Speaker 2 [00:36:45]

Speaker 1 [00:37:21] Yeah. Give them like a kind of a haircut, I guess. No, trim them.

Speaker 2 [00:37:25] No, no. And a cutaway part of their wings or their horns.

Speaker 1 [00:37:30] Oh, because I know there's one because of it was called coppicing. I think like two carpets is also involved with trimming trees in this way.

Speaker 2 [00:37:42] Oh, this is this is quite radical.

Speaker 1 [00:37:44] Yes.

Speaker 2 [00:37:46] And we were preparing for that. And and it looks very civilized now with this green grass. And then we had taken off the branches already so that this the new twigs don't come out at the at the trunk, but they'll come out later on at the top. And it looks so civilized that I imagine that the guys who were supposed to do their work didn't do their work because they thought this should be this way. So that's the funny thing.

Speaker 1 [00:38:12] Yeah, yeah.

Speaker 2 [00:38:13] We're very proud with that.

Speaker 1 [00:38:15] But it's very nice.

Speaker 2 [00:38:16] All the trees you see here in principle should have been chopped off. All this. it's a tree. Shrub. Yeah.

Speaker 1 [00:38:23] So would you like to see them stay? Yeah.

Speaker 2 [00:38:26] Yeah, there is. There is very, very little wind shade. Okay. And there's no shade sunshade to be had anywhere.

Speaker 1 [00:38:36] Uh, shade is also a good kind of benefit from that as well.

Speaker 2 [00:38:39] Yes. Also for the animals and for the birds and where it's warm and cool. I mean, the sun rises there in mid-June and it goes under here. Yeah. Yeah. And there is no shade. If you if you chop down those trees, there is no shade anywhere, it will just heat up.

Speaker 1 [00:38:59] Yeah. Like so that's also, I guess, a problem in the city with like the kind of heat island effect you don't have maybe these cooling kind of areas like under trees, for

instance. I've also experienced myself collecting data in the in the sun going through. There's not really many places to kind of stay and like get some shade as well.

Speaker 2 [00:39:18] There's nothing, nothing shady here. And of course, with with this view of it all should be reeds and no trees there. It won't be any shade anywhere. They also had us. So have did you have that did you get that piece of paper about the trees? Did anyone give it to, you know, get it for.

Speaker 1 [00:39:37] It? Okay. Thank you.

Speaker 2 [00:39:41] So that's why I kept it perfect. You can have it.

Speaker 1 [00:40:14] Oh, thank you.

Speaker 2 [00:40:18] They said it would take two, 3 to 4 days, but they're gone already.

Speaker 1 [00:40:21] Yeah.

Speaker 2 [00:40:24] Just show you, we made. I hope I have one. Mm hmm.

Unidentified [00:40:40] See where I can find it.

Speaker 2 [00:40:41] Yeah. This is for \$0.02.

Speaker 1 [00:40:45] Thank you. Could you possibly send me an email with this?

Speaker 2 [00:40:51] But I have probably. Yeah, I probably have the thing. I just. What's the plan with all the reeds model?

Speaker 1 [00:41:14] Yeah, well, as you telling me before, I think that this photo with the, uh.

Speaker 2 [00:41:20] Yeah, that's me. Yeah, yeah, yeah, that's me doing the measuring. Mm.

Speaker 1 [00:41:40] But I think it's also quite interesting to see what happens when you then inform maybe people who don't have the awareness, for instance, of the reeds. You make a plan and you think, okay, we're going to have reeds here. Despite the fact that they won't actually grow there. Yeah, yeah.

Speaker 2 [00:42:05] Well, yeah. And I mean, it makes sense that it doesn't grow there, but it took quite some research to find out. I mean, I was searching for quite a while, you know, to find out why it didn't grow. Yeah. With some friendly biologists and so on.

Speaker 1 [00:42:21] Yeah. Using the network and kind of like talking to people as well. Well, um, I think, uh, well, thank you so much for your help, and.

Speaker 2 [00:42:31] I hope you have a good project.

Speaker 1 [00:42:33] Yes, I think I have more than enough information and I think, yeah, it'll help me kind of get a good sense of like the perspective of like the residents and kind of the landscape architecture kind of expertize as well. I think everybody has maybe a little piece of the truth and was sure kind of talk to everybody. You get the full picture.

Speaker 2 [00:42:52] Yeah. I mean, just having the questionnaire and, and a statistical, um, amount of statistical numbers. Yeah. Is different to getting a feel and being in the place and looking around and.

Speaker 1 [00:43:05] Of course, just being on the ground. Yes. So thank you very much. Official end of this interview. So. Yeah, thank you.

Appendix K (Sponsland Transcript):

Sponsland.m4a

Speaker 1 [00:00:01] Okay. So, um, just a little bit about myself. My name is Michael Kleszczewski, and I'm an international student at the University of Groningen, and I'm doing my research about nature based solutions in the city of Groningen and also specifically about Meerstad as well.

Speaker 2 [00:00:18] Okay. Sorry.

Speaker 1 [00:00:21] Yes. So. So could you could you maybe start by telling me a little bit about your profession and how you're involved with the Sponsland project?

Speaker 2 [00:00:33] Yeah. Okay. So let's introduce myself and then I am a landscape architect. I studied at Wageningen University and I work in, of course, most of the time in the Netherlands and looked forward to this project, which had to do with water management of reinforcement of dikes building with nature and water projects. I worked on that project of eiberg myself, which housing area in Amsterdam and it is built so previous years it's been built on the island in makemeer and I was a partner in the office ___ Architecten. and I've been on for for 4 years governmental advice on landscape and I was asked to be involved in Sponsland because the municipality of Groningen they have.

Speaker 1 [00:01:44] Oh, I think it's coming up.

Speaker 2 [00:01:54] Do. Oh. Okay. I am against something.

Speaker 1 [00:02:13] Yeah, I think it cut out. Oh, sorry. Continue, please. Oh.

Speaker 2 [00:02:21] And yet I was saying. I don't know if you could hear me, but I was telling about the tradition they have in Groningen about architectural manifestations. And yeah, well, this time they decided to have a manifestation of climate adaptation because it was planned that in Groningen of course, you know, it is the global central climate adaptation. Mm hmm. And they had plans in October 2020 to be a global summit. And. Well, for we can and our manifestations can prepare something to show at the summit and to that. Yeah. To have material for the debate. So I was asked together with _____ from ___ Landscapes, also a landscape architect, to be the curators of the manifestation. And yes, we are both we are not from Groningen. Yeah. Yeah. We love to do it and thats the reason I was involved in the project.

Speaker 1 [00:03:45] Okay. Very, very interesting. So, uh, in your opinion, maybe as a landscape architect, what value does the implementation of nature based solutions and sponge city concepts have in the city of Groningen?

Speaker 2 [00:04:00] Yeah. You mean a landscape architects in a profession in general or specific? In the Groningen situation.

Speaker 1 [00:04:10] In the Groningen situation?

Speaker 2 [00:04:11] Yeah. Well, what I think what's rather interesting from the point of view of a landscape architect is the surrounding of Groningen, that we have a lot of effects, have all the landscapes that we have in the Netherlands together in a very small area. And I think that makes it interesting. And even all the kind of topics we are facing with climate adaptation like droughts and the problems of the peat areas and the salinification and of course the protection against floods. It is all together in Groningen. Mm hmm. And we didn't realize before because we started to work on it we were looking at a soil map. And as you do as a landscape architect, really starting from the soil and the water system. And we realized that maybe there isn't any other place in the Netherlands where all those challenges and all those different landscapes come together in such a concentrated way as it is in Groningen. Mm hmm. So that makes it rather interesting. And the other thing is that, of course, the city of Groningen, it is really a city, you know, and it is not a village or something it's really it is an urban vibe and culture, but it is immediately surrounded by the landscape. And that also makes it interesting. So we in fact, immediately first, I think our first meeting. We made a decision let's make a section from the higher ground in Drenthe to the sea and of course the Waddenzee, and the island of Schiermonnikoog intersection and the city of Groningen intersection for the project of the city we put a focus on the access of the city. So the connections from the inner city and the landscape, like the Zuiker as or the Damsterdiep or the Hereweg. So that was. Yeah. A decision we immediately made as curators and the organization that this has to be an interesting approach to do it like this because what we wanted is not that, from the start it was clear that we were going to invite eight offices, design offices of landscape architecture. Mm hmm. But we wanted to make more connections between the projects that. That was also the reason that we made a choice for a section. And all the projects have their own position along that section. But that because because of that, they also had to cooperate with each other.

Speaker 1 [00:07:21] Mm hmm. Oh. So within this project, what kind of nature based solution and specific projects do you think would have the potential to provide the most benefits to local residents?

Speaker 2 [00:07:37] Yes. Um, let's address the question. Um, well, I think, um, I think the project of Schiermonnikoog is a good example. Mm hmm. Because. But, of course, you know. But we ask the designers to think ahead of years, perhaps at 2120. And we did it because we wanted to that they Yeah, we wanted that they have a more visionary view on the solutions. But on the other hand, we ask them to start solve the problems from today and I think Schiermonnikoog is interesting because the farmers in Schiermonnikoog already have a huge problem with the drought in the in the meadows of the polder and they have a problem with th stikstoff this pollution on the dunes. And that was the starting point for the designers to think about a new strategy for the identity. Mm hmm. That you have to keep the water in the polder as

long as possible and that you are more rewilding the dunes, and yeah, of course. The reinforcement of the dunes against sea level rise, if you do it in a more dynamic way. And well that means that you are getting away from that, from the forest, from the trees on the dunes and make a more sandy landscape. Mm hmm. I think it's a long term vision, but it is also connected with the problems they have today. And also it's going further. It's the solutions in a more radical way that they came up with for today. So I thought I mentioned that it was really a recognized by Schiermonnikoog by the people who live there. And of course, they were surprised by some aspects of the plan. But it was not that they said, oh, no, it's it's you know, it's never going to happen again. They are curious if it is, it will be possible, you know. Okay.

Speaker 1 [00:10:31] That's okay. So that's good that there's quite a lot of support also from local residents and they see the benefits of how these plans can help them as well as long as they, as well as the environment. Um, I wanted to ask, are you familiar with the development of Meerstad?

Speaker 2 [00:10:50] Yes, a little bit. I have to confess I haven't been there for years.

Speaker 1 [00:10:55] Okay.

Speaker 2 [00:10:56] I have been there in the beginning, when there was only a few houses of course I know the plan that had been maybe ten years ago and there were already few houses built at that moment.

Speaker 1 [00:11:08] Yeah, because. Because I also wanted to ask a little bit about Driebond development. That's the one. Uh, I believe it's called the Blue Ramparts Project. And that's on the way to the neighborhood of Meerstad. And maybe you could say a few words about that area, because as of right now, it's still a mix of farmland and also kind of built up more industrial. So how would you maybe see that development interacting with the neighborhood of Meerstad?

Speaker 2 [00:11:39] Yeah, the designers from the project at the Danish office they saw it as a kind of stepping stone towards Meerstad and they were convinced that for both bicycle and pedestrians, the path along the canal would be a very nice connection between the inner city of Groningen and the Meerstad area. Mm hmm. So they really placed that project and on that urban access from the inner city, to Meerstad and they thought that the canals. Yeah, that it was to make it more interesting and make it more natural borders that also benefit. Yeah the recreational experience of. Yeah. For people who are traveling or biking or walking along the canal. Yeah. I think it's rather specific in their view that they had the kind of statement natuur at the beginning they said it's not the area to make new parks but we have to integrate the green into the. Yeah. Into the industrial areas. They call it parks in inner city areas. And. Yeah, that's. But by making only green areas, it's easy to do. But that's not a real problem. The real challenge is about the greening of the ugly areas and the industrial areas. That's more important than like. Innocent park area.

Speaker 1 [00:13:48] Mhm.

Speaker 2 [00:13:49] Okay. So in their view that they want to make steps by the transformation of the um of, of the, that whole industrial area. Given the fact they want to make a kind of green stepping stone towards also towards Meerstad.

Speaker 1 [00:14:07] Mhm. Yeah. I think it's also quite difficult definitely to have these areas that are already built up and try and then integrate and go backwards rather than start something completely fresh on farmland where nothing is built. So that's also definitely a challenge to keep that working while, integrating as well. Um, yeah.

Speaker 2 [00:14:31] What is your opinion about Meerstad?

Speaker 1 [00:14:33] Um, so my opinion about Meerstad so I think, uh, it's quite interesting to see how it's developed over the years after talking to residents in the neighborhood and they said at first it was kind of advertised to be a bit more sparse, a little bit less built up, but over the years it's kind of densified now. So there's maybe a little bit of a disconnect between like Bureau Meerstad and, you know, the firm is building it and what residents maybe expect. Yeah. So I think it's interesting and quite nice that they are building out like a neighborhood that is built around greenery and water and lake. I think it's quite interesting to see that kind of develop, but I think they still need to do some work because they don't really have like a community center. So it I think they still need to work on the community aspect and bringing people together as well. Definitely.

Speaker 2 [00:15:26] Yeah.

Speaker 1 [00:15:26] Yeah.

Speaker 2 [00:15:28] Yeah. So I mean, Groningen and Meerstad. Yeah.

Speaker 1 [00:15:35] Yeah. But I want to ask maybe how has citizen involvement kind of influenced the design and the implementation of these like projects and nature based solutions within Groningen? Has there been a lot of feedback like how is how is how have people interacted with this, this plan?

Speaker 2 [00:15:57] The Sponsland plan Yeah. What we did is when we started to make the assignments. We have a, of course, discussions with all stakeholders in those areas except for the for the Urban Project. It was with the municipality of Groningen and the approaches are based on the real problems that we have nowadays. You can imagine better how Driebond area. If the municipality is also convinced, it has to be, changed that it can be better than it is now. And for the project in the rural area, First we started with water boards with the organization of farmers, Groningen Landschasp they are the maintenance of the natural nature areas, Rijkswaterstaat and governmental service for water management. And well we rather yeah, we just went around to get a map on the table with them and I said, but I have problems and then based on that we made the assignment and we ask one person from that stakeholder

from stakeholder meetings to be what we called canceshouder how to problem a problem keeper or how do you call it. And he had a task to organize the discussion during the design project, to organize the discussion with the other stakeholders. And yeah, a little bit hard with the handicap of the lockdown of covid.

Speaker 1 [00:17:49] Yeah.

Speaker 2 [00:17:50] So we had, we had plans for real time meetings with the stakeholders in the area, but we had some of them and then after that of course that piece and so on. So the design offices they had to yeah, it was their task to keep in touch with the people and stakeholders in their project area and to discuss the project with them. And of course they designers, they because it is not the kind of assignment that really has to be built. So they had the kind of freedom and it also has to do, of course with the long term view that they had to develop, 100 years ahead but I think most of I'm really satisfied about the connection that has been between the stakeholders and the design offices. And of course we had the presentations at the end. We had the presentation for everyone that was online and but the project was announced that afterwards we had small meetings with about ten or 12 people, the stakeholders and the municipalities in the project area to discuss the project. And most design offices afterwards had meetings to present their project, for example. So a lecture during lunchtime for for the office of the municipality and those kind of small meetings. So yeah, we hope and of course we have the book we have the website we make a kind of a manifesto is a statement about lessons learned from this project and how can it be benefit from other similar processes? Yeah so, yeah. And you know what? I think so. I'm convinced that some of the projects really will be picked up by the, for example, the projects in the _____ and the the _____ already their organization regio Groningen-Assen they already really make it their own project rather enthusiastic to realize it. But maybe not the total project but could start with the realization of it, so it depends I hope a project like Driebond. It's not so easy, of course, to. To change an area because it's a lot of ownership for the owners. Of course, most of the buildings. But as far as the municipality can start, I think they will do it in the coming years. Yeah, we had to. Of course it was really nice that in November. The exhibition on the Grote markt as it was to get a vision of our manifestaion in Groningen. I don't know. There's also something about greenery, but also the neighborhoods. Mm hmm. And a lot of people were shopping in the neighborhood, and they came into the exposition, to look into the models and the panels of the design and to discuss it and it was Yeah, this was rather surprising. People are interested in it I think.

Speaker 1 [00:21:52] Yeah, it's very good that there's quite a lot of different ways that citizens can get informed about this. And not just regular citizens, but also like landowners and people involved in other ways in the project as well. And despite Corona also having an impact, of course, especially with in-person meetings. But, um, it's good to see that it's able to be, you know, able to have those interactions regardless, you know, and that it comes together.

Speaker 2 [00:22:19] Yeah. Yeah. Yeah. We try. And of course it's always a little bit to find the balance between you want to give some freedom to the designers, of course, to make their own ideas, because it's not the kind of most of the offices always are working on real comissions to

produce designs. And it has to be practical and it has to be realized and not too expensive and so on. But of course, innovative manifestations also want to give them some freedom to develop more radical ideas and visions. But on the other hand, we sort of have to be connected with people and stakeholders in Groningen. So it was looking for balance. But yeah, I hope I think it was rather successful and like I mentioned, in Schiermonnekoog. They were in the beginning they were a little bit reluctant and a little bit afraid, Oh, God is going to happen. But maybe of course it is a small community. Schiermonnekoog and they are a little bit afraid of kind of silly ideas, he said. It was an office from Belgium, that they have people from abroad and what are they going to present to us. But yeah, I think they were really surprised and it could help. It is also positive, positive feedback from the island, the inhabitants of the island.

Speaker 1 [00:24:00] Yeah, that's very good to hear. Very good to hear. Um, so I, if I understand correctly, you have a meeting at 3:00, so I just have a final two questions, if that's all right. Mm hmm. One. Is there anything else you'd really like to add to these themes? Anything I should. I should know about, or maybe look into more.

Speaker 2 [00:24:21] And and, yeah, it is. Of course, the subject of this study is about a natural based solution. Yes. Yeah. And and, um, well, I think it is what I want to add is, of course, has to do with our profession as landscape architects in the Netherlands. But we were educated and educated in the seventies and eighties. That the lessons learned, of course we can in former ages people have to adapt to the natural circumstances, but nowadays it's not necessary anymore. And of course for landscape architects always feel a little bit sad about that because the whole variety and the beauty of the landscape, it was made because people reacted on a specific way on specific conditions. And of course we have now been independent from and we can manage the water system because we have the pumps and we have two techniques and we can manage because we have all those artificial fragility of this soil we can manage. But I think the lessons from the climate adaptation and of course from my point of view, it is a very positive lesson that now we have to adapt again to the conditions of the landscape. We can not. Everything can make everywhere anymore. I think this is a very important message to give. I can imagine in your thesis research, you you're doing that. It is a kind of mindshift especially for people in the Netherlands because we were so used to that we can you know, we can manage the whole landscape, we can manage the natural conditions. And now with the climate adaptation that, yeah, we have to be aware that we cannot manage it and we have to be able to look more carefully to the different conditions of the landscape and how we can adapt to that. And I'm confident that the landscape will be and I hope also the biodiversity will be improved from that approach. And I guess the greatest overall lesson I think we from Sponland and I don't know from which country are you from.

Speaker 1 [00:27:08] The, from the US.

Speaker 2 [00:27:10] From the US. Okay. Yeah. Well I think in your circumstances it's a little bit different because I can imagine that you all have been more aware that you cannot control all the natural systems.

Speaker 1 [00:27:28] Yeah, there's definitely.

Speaker 2 [00:27:34] In the Netherlands, we were rather convinced that we could make it, the landscape as we wanted it. And now, you know, it's really a different approach that we have to be aware that we are not able to do it.

Speaker 1 [00:27:57] Yeah, definitely. I think it's also just an awareness maybe of the change in context and how maybe what was possible in the past now just isn't feasible, especially due to climate change and just a change in all these conditions. So definitely requires some kind of rethinking of our approach to everything from how we live and how we kind of build our cities is definitely to be more and more important to the future. Yeah, hundred percent. Well, could you recommend any other experts involved in the project and or somebody in the field? I'd be open to an interview.

Speaker 2 [00:28:30] Yes. Um. Well, maybe. Um. Yeah, I have to think about it. Do you want to have an interview with the. There's some design offices or more involved experts.

Speaker 1 [00:28:52] Um, well, either really, like, involved experts would be quite nice because it's quite targeted for my research, but, um.

Speaker 2 [00:28:59] Yeah. Yeah. Well, I'll. I'll have to look in my email and contacts. Maybe it just would be very nice for you to have an interview with. Um, if there Robert_____ an expert in service of Rijkswaterstaat environmental service and involved in the island of Schiermonnekoog about of course as sea level rise and so on. And I think it is another interesting view in how to handle the nature based solutions involved in the enforcement of dunes and of the Waddenzee. So it. It's more about the water topic. Mm hmm. Um, but I think it can be. Yeah. Yeah. Yeah. He's the first person who comes to my mind, is very open minded, and I think he would like to have such kind of interview so I could put his name and contact on the email. And maybe I have some other names coming up. And as I said to you.

Speaker 1 [00:30:15] Yeah, that sounds great. That sounds amazing. Thank you so much.

Speaker 2 [00:30:18] Well, good luck with your thesis.

Speaker 1 [00:30:22] Yeah. So. Yeah. Thank you so much for your time.

Speaker 2 [00:30:26] Got me.

Speaker 1 [00:30:26] Yes. Thank you so much for your time and and your great words on the subject. I look forward to incorporating into my research. So once again, thank you.

Speaker 2 [00:30:36] Yeah. Okay. Good luck.

Speaker 1 [00:30:37] Have a good day. Bye bye.

Appendix L (The biologist Transcript):

Recording (5).m4a

Speaker 1 [00:00:01] Yes. So I guess just a little bit about my research. So I chose Meerstad as my topic for my thesis. I'm a planning student at the Faculty of Spatial Sciences and I wanted to kind of investigate the natural spaces within the neighborhood and the process of citizen involvement in the design and kind of how nature based solutions have affected the neighborhood as well throughout its planning process. So I actually got a recommendation to speak to you from one of the residents, Rob. He mentioned that you're quite involved in the natural aspects of the neighborhood and especially regarding the forest, I believe, at the north side of the lake as well.

Speaker 2 [00:00:39] Yeah. Yeah, that's right. Yeah.

Speaker 1 [00:00:42] So I suppose my first question is, when did you first start begin your involvement within Meerstad and maybe some words about your profession? Yes.

Speaker 2 [00:00:54] This was right from the beginning, because at that moment I was chairman of the Environmental Federation of Groningen. Mm hmm. And that meant at that time, a very political function, because I had to deal immediately with the authorities from the province of Groningen.

Speaker 1 [00:01:17] Mm hmm.

Speaker 2 [00:01:18] As a representative of all major organizations in Groningen. So at that time, I was discussing the basics of the set up of Meerstad dieptieren, the deputies so the political leaders of the province, namely with Mark malon was a very important person at that moment, he was chief inspiration for Meerstad. Mm hmm. And those were all discussions about what the position of nature would be in the whole setup that was, in fact, a general political background of the whole process. So later on, I was then asked to to be a member of the lotrichtingskomisie.

Speaker 1 [00:02:20] Mm hmm.

Speaker 2 [00:02:21] And I have no idea whether, you know, it's. I just can't put it in English. I have no idea.

Speaker 1 [00:02:29] Yeah. First time I've heard of this actually.

Speaker 2 [00:02:32] Is land development, translated because I don't know. But it's correct as a land development committee.

Speaker 1 [00:02:40] Okay. Yeah.

Speaker 2 [00:02:41] Yeah. It's a formal Dutch procedure and during my tour, _____ it's a committee of different parties of the political authorities to water authority, farming, industry, agriculture, industry, nature, conservation, recreation, mainly the parties that are taking part in such a committee. And they have to develop spatial plans, landscape plans for a certain project. Mm hmm. So it was mainly started all as with improvement of agricultural grounds. Mm hmm. But then later on, it became broader, integrating those different aspects of major agricultural and recreational purposes.

Speaker 1 [00:03:35] Mm hmm.

Speaker 2 [00:03:37] So that was an official committee Meerstad where we considered different potential nature areas that could be involved. But then there was the financial crisis of 2008. Mm hmm. And the process in Meerstad broke down. And for political reasons, this structure of this committee was ended by the deputy of the province. Mm hmm. So. And then the process changed because there were two towns, communities, involved, Groningen and Middengroningen. And then Groningen took over the land of Meerstad. And it became not a project of the province anymore, but of the city of Groningen.

Speaker 1 [00:04:33] Mm. Okay.

Speaker 2 [00:04:35] So then all structures changed. And then the final political move was that the city of Groningen installed a BV, and you have any idea what a BV?

Speaker 1 [00:04:53] No, I'm not sure.

Speaker 2 [00:04:55] It's a it's a economic structure. Mm hmm it's a besloten vennootschap. Mm hmm. Is the Dutch word for it. And it's a limited liability company. Okay. In English translation so that this is a a political move to translate the responsibilities from the direct board of the of the city. Mm hmm. With respect to the Council of the board of the city, etc.. To a structure where well, it's not any longer so clear who makes the decisions, who has the responsibility. You know, the the political leaders of the city said, well, no, that's in the BV, the limited liability company and it is not any longer our problem. Yeah. At the end, of course, they stay politically and they have to take the consequences of all that's done.

Speaker 1 [00:06:07] Yeah. So you actually were more involved in the political side of things in the organization?

Speaker 2 [00:06:13] I am a biologist myself. So I became interested because of my interest in the landscape and the nature values of the area. Yeah. So that was my inspiration and all this political stuff that you have to take into account. Yeah. Because otherwise you, you, you, you

are completely right scientifically. But you will lose because you don't know the political considerations.

Speaker 1 [00:06:41] Yeah, of course. Definitely. You have to take into account all the stakeholders the process, how to get things done within this neighborhood. So as a biologist then, how have you seen maybe the design of nature within the neighborhood change since these initial initial plans?

Speaker 2 [00:06:57] Yeah, right. The initial plan, there were different forms of that there was the Miami plan that was sharing an enormous surface with Meerstad, the surface of Meerstad is more or less as big as the center of Groningen now. So it's a doubling of the surface of the city. Mm hmm. Yeah. So that is really for a Dutch town. That's. That's enormous. Yeah. And the original idea that was of 10,000 houses, and that should just be spread out all over the countryside. Mm hmm. So each. But that wasn't it. Everybody agreed that that's sort of a ridiculous way of doing it.

Speaker 1 [00:07:41] Yeah.

Speaker 2 [00:07:42] Because you are really. Well, you have no structure anymore in the landscape. So that became this project plan of 2005 and you will know that. Yes. That the two political parties agreed on that. And there were some more concentrations there's the lake necessary for water in times of high floods to get rid of the water. Mm hmm. And and some industrial components that was more or less a part of the area. Yeah. And as a nature park we took care that there were at least some areas of nature reserve in the whole. And we thought that it was rather well, it was rather limited, but just acceptable. That was the view at that time.

Speaker 1 [00:08:43] Yeah. I've actually gone around and collected surveys and data from local residents and some even say that when they first purchased property there and bought the houses, they said it was quite open and now it's really filled up and they have more and more of the area being built up rather than just left to be green and kind of that natural space.

Speaker 2 [00:09:04] Yeah. So now there is a nature table. This is a limited liability company, organized nature tables. Mm hmm. That is the BV Meerstad. Yeah. And in that there is participating of the Environmental Federation and natural monuments and Staatsbosbeheer. Groningen landschappen are the big institutions the government that takes care of nature reserves in the Netherlands and they are participatin with some local groups and I since 1994. I'm a member of the workforce nature and landscape in Duurswold. Mm hmm. And that is the basic group, the local group where we well, we give information about nature, organize excursions, debates and tours, and also are asked our opinion in the city of Middengroningen and the city of Groningen itself for advice on major development.

Speaker 1 [00:10:20] Yeah. So, so definitely more, a little bit more of the educational side and informing people as well.

Speaker 2 [00:10:30] There has been a large project and the nature of middengroningen and it's now naturrugwold. Okay. That is about. 1700 hectare of new nature that has been developed and since that change in time from 2000 to 2015 .

Speaker 1 [00:10:50] Yeah.

Speaker 2 [00:10:51] And that that task was accompanied by this task force.

Speaker 1 [00:10:57] Mm hmm. So how would you say citizen feedback has influenced the design of nature within Meerstad?

Speaker 2 [00:11:05] It's just very limited. Okay. It's it's very limited as a as a nature group, we took care of the harkstedebrooklanden. Yeah. We even went to the highest court in the Netherlands to. To defend its existence because it should disappear in the lake at that time. Yeah. And and just because of the financial crisis, the area is still there. Yeah. And now it's part of the new plans of of nature. So now they recognize that it's it's a very valuable part of nature also for the citizens of the new citizens of Meerstad, because they well, they need to have some areas where they can have their experience with natural values.

Speaker 1 [00:11:58] Yeah.

Speaker 2 [00:11:59] So well this is one part of this, its a good part. And of course, we are very pleased that that that it will be conserved. Mm hmm. And then there are two other corridors. And now we are still discussing and saying we do not think that there is enough expertize at this moment to fully translate the development plans in natural values. And there's nearly no knowledge in the in the Meerstad itself.

Speaker 1 [00:12:37] Mm hmm.

Speaker 2 [00:12:37] In this organization, they have no ecologists. They have no knowledge of that. Mm hmm. So they are depending on external expertize and for such a big area we just advised that they should take of organizing advice at a national or even international scale for such an area.

Speaker 1 [00:13:01] Yeah.

Speaker 2 [00:13:02] And that has not been done yet. So and from local inhabitants, there are some that are very aware of the natural values, but that is all very incidental. Mm hmm. And. And. Well, as far as I can see, the knowledge of the Dutch inhabitants of natural values is rather limited. Yeah. Has decreased throughout the last two decades.

Speaker 1 [00:13:31] Yeah. Because it's quite interesting that you mentioned that there's a lack of expertize because after even speaking with having another interview with a local landscape architect who happens to actually live in the neighborhood, she mentioned that she drafted this

plan to introduce more reeds into the lake and how the implementation phase kind of was not that successful due to just purely because of the reality that the reeds had to be planted at a certain depth for them to actually grow. And I think the water was too deep if I remember correctly.

Speaker 2 [00:14:04] So yeah. So yeah you need to very good high expertise to develop such areas which will be durable at the longer time periods. Yeah. Because you can, the initial ideas can work. But then how does the area look like after five years or ten years? You have to realize what what will be the scope of potential developments that it needs a lot of consideration before you can. It's it's at this moment things are signed in on the map whether it's. It's yeah. As as as you can develop trees. And that's easy, but to develop natural values is not that easy.

Speaker 1 [00:14:58] Yeah, definitely. I think it's quite interesting that I did even I didn't even have comments from local residents that, um, certain areas, trees were beginning to grow just naturally, but they were cut down because they were not in the plan. They were not accounted for. Yeah.

Speaker 2 [00:15:13] So you have to realize that the area was originally a meadow area. Mm. And it was a rich bird population, of course, that has been completely gone. And now there has been a rather large area that has been rewilded now. Mm hmm. With new new birds and new types of vegetation that will go also because of. There'll be houses built a street made, of course, that's unavoidable but to make use of the different natural values that are still there is even not really in the minds of the people who are developing this. It's architects from Rotterdam who are basically developing Meerstad. And they have no idea of of if we ask, do you know Groningen the structure of the ground? Do you know whether it's clay or sand? You have no idea. Oh, yeah. Only for technical reasons. They have some knowledge, but to develop natural values. Yeah, well, it's a different story.

Speaker 1 [00:16:23] Yeah. So I guess that definitely leads to the question of. So what would you say are maybe the most important values to be preserved in this plan? Because it is changing all the time, of course. And you have like the influence of time and how you do it. So what would you say are the most important values at the moment and what should be maybe preserved within this plan?

Speaker 2 [00:16:44] Well, at this moment, there is only one spot, and that is the area of the hardstedebrooklanden fosenburg nearby that have clear natural values that can be preserved. Yeah. And then they should try to choose the natural. And there is Gruno park. I don't know whether, you know that. Have you been to the area?

Speaker 1 [00:17:12] Of the park? I don't think so. No, I have not made it there yet.

Speaker 2 [00:17:16] You should really go there to have an idea yourself. Gruno park is where a camping is and a water ski area.

Speaker 1 [00:17:25] Oh, okay.

Speaker 2 [00:17:27] And that will be also a one of the parts of the natural habitat. There are some nice tree groups there that will be conserved. So what they should do is, is at in very much detail, look at which natural values are there in the form of trees, in form of a ridge that is species rich grass area and try to integrate those elements in the natural zones that are planned.

Speaker 1 [00:17:57] Yeah.

Speaker 2 [00:17:58] And then the other important aspect that we should stress a lot as partners now is to make clear connections between the different areas. Yeah. So that there will be zones where, where also animals could migrate so that it's not isolated islands of some green spots. Yeah. But that there is a connection between the different areas.

Speaker 1 [00:18:22] Yeah. Definitely connecting those natural areas is quite difficult, especially since I actually received a map of the, um, of the master plan. And actually it seems as if they want to double the area of the lake as well and build it out even further.

Speaker 2 [00:18:39] Yeah. And the lake has different functions they see now they try to develop in the north east part a kind of a cleaning part. I even don't know this from the Dutch word for it yes. Kind of natural filtering. But but they try to install that in the north west part, just near the harstedebrooklanden. Yeah, well, that could work, but that needs lots of careful preparation so that you can clean up also water of the lake. And yeah, this way you, you, you can make some guarantees that things will be set up in the right way.

Speaker 1 [00:19:32] Yeah, yeah, definitely. It sounds like there's a need for a lot of expertize within this area that maybe sometimes is a bit lacking and could be worked on.

Speaker 2 [00:19:40] Yeah. And then they should really look for external expertize and just one ecologist from the bureau, which is doing a simple job, it needs consideration.

Speaker 1 [00:19:52] Yeah. Yeah. And then we try.

Speaker 2 [00:19:53] To convince them that and they say yeah, we see the point, but I hope they will do it.

Speaker 1 [00:20:00] Mm hmm. So I guess within all this also, you do have the local residents. And as I said before, maybe there's limited kind of knowledge about these kind of natural aspects of the area. So what would you say maybe would be a good way to go forward and maybe what are some of the benefits that could be communicated to residents to maybe make them appreciate the nature aspects a bit more?

Speaker 2 [00:20:24] Well, there should be made a good inventory of the natural values that are now present.

Speaker 2 [00:20:35] Because I don't think there is a good inventory of that. And then you could present it and present it also to the to the people. For instance, they they they want to have some islands in the lake. Yeah, but of course there is a recreational pressure. Many of them do have some sort of small, bigger boats. Mm hmm. So are those islands also available for people then you can forget about the breeding colonies of any bird. Yeah, it's a matter of choice. Well, what do you want? And the normal way of dealing with that is making zones where you have direct recreational pressure, and then slowly you make it more difficult to enter the area. Just physical barriers, making the water less deep or have some more vegetation. And then you see in the natural system, you could regulate things much easier than by shields that it's forbidden to be here because that will not work.

Speaker 1 [00:21:44] Yeah. Yeah, that's definitely true.

Speaker 2 [00:21:47] It first asks for knowledge about the initiative by the people who organized this all and share this knowledge and discuss that with the local inhabitants and then also have external expertize and then again and discuss with the inhabitants, well this is the way we want to develop this.

Speaker 1 [00:22:06] Yeah, definitely. Because I think that's also maybe a bit of a difficulty as you have this big master plan, you have these natural areas. But I think there's also this pressure to see, okay, how does this directly benefit me as a resident?

Speaker 2 [00:22:23] The problem is I see their problem. They have to do have to give an impression and a general idea of the direction of the plan. Mm hmm. Because that is what the political parties wish. Yeah. And they have to stay vague at this moment. But do you really want to develop a project plan in detail, then? You have to know the details. Mm hmm. And that is a different phase where you have to invest time.

Speaker 1 [00:22:54] Yeah.

Speaker 2 [00:22:56] And I don't know. Yeah, well, whether that's already in the mind. Yeah. What I have seen in earlier projects where I was involved in is that it's absolutely necessary to have specialists given space and time to work on this and to give them some authority to work it out and then consult people around whether they can live with that.

Speaker 1 [00:23:21] Mm hmm. Yeah, definitely. Um, so how would you see Meerstad developing into the future in the next ten, 20 years? How which direction would you see it going? And maybe how could maybe be improved upon?

Speaker 2 [00:23:37] Um, I have no idea because it's, it's partly completely depending on the political situation, and it's all about money. Yeah. So one of the cries of the people where we

had just this meeting with is they are also looking for financing from from external sources, European Union national sources that can participate in, in the costs of developing those major aspects. Yeah. Because just based on selling houses and selling grants, they know that they cannot make it. They have not enough money for it.

Speaker 1 [00:24:21] Yeah. So there's a lack of funding as well that goes into play.

Speaker 2 [00:24:25] At this moment. Yes. Yeah. Yeah. So and then it depends on, well, what the political situation now is employment in the Netherlands going. How much capital is there? Yeah. How this development goes. How big is the pressure to to build as many houses as possible in the shortest time? No, that gives you a different idea.

Speaker 1 [00:24:50] Yeah.

Speaker 2 [00:24:51] So it's very difficult to predict.

Speaker 1 [00:24:53] Yeah, I think it's definitely quite interesting just from all of my discussions and talks with all these different stakeholders, residents, the bureau, landscape architects, everyone seems to have quite a different approach to the neighborhood and a lot of residents are just kind of happy to accept it as it is. Say, Oh, it's green, it's nice, fine. But it definitely seems like there's a lot of other aspects that come into play, like the politics, the funding. And I think also you have these maybe aspects of nature based solutions and nature. That are a bit more difficult to implement, especially if you can't find an immediate financial return on them. Yeah.

Speaker 2 [00:25:31] And of course, you have to be clear about one thing. All the people that are leaving now there have a special interest to to keep things as much as favorable for them at this moment. Yeah, but it will be 7000 houses at least being built here in the next ten years. Yeah. So that means that the majority of people that live there have no say at all at this moment. They're not represented in this moment.

Speaker 1 [00:26:03] Yeah. Yeah, that's true.

Speaker 2 [00:26:08] 15,000 people, at least, or even more. 20 or 25,000 people that will live there have no voice.

Speaker 1 [00:26:15] Yeah. Yeah. That's definitely the difficulty.

Speaker 2 [00:26:17] Of course. But that is rubbish. That's the situation.

Speaker 1 [00:26:22] Yeah, that's definitely just the thing that when you do plan a new community, plan a new neighborhood, you do have a lot of kind of aspects that maybe aren't even addressed. I know another complaint from the residents was that there is still lack of

adequate schooling and lack of even a supermarket within the neighborhood, despite the fact that it's been around for, you know, ten or 15 years at this point. You know, definitely.

Speaker 2 [00:26:46] And of course, it's also important to say what is the social structure of such area? Yeah. And also that we discussed this week that they should take care of connecting the social structure with with also with nature aspects, because how much pressure is there for recreational activities for teenagers? But there's a whole generation of young people that will grow up there, do they have enough possibilities. And then how do you how do you accommodate that.

Speaker 1 [00:27:21] So.

Speaker 2 [00:27:22] Its all integrated as part of the problem

Speaker 1 [00:27:25] Yeah. So what do you mean by possibilities for young people with nature? Like, in what sense? Well.

Speaker 2 [00:27:31] You know, there will be many houses with young, young families. Yeah. And and there is pressure, and rightly so, that also lower social classes should have a possibility to to rent a house there. Yeah. That means that you can expect lots of children. They'll grow up. They're slightly isolated from the city and still on a longer bike trip to the city. Yeah. So there have to be facilities just in the. In the area there. Yeah. Where they can play around, where they can make noise if they want to without annoying too many people. Yeah. Well, doing the things that young people do of course. And are there facilities for that? And how are they organized? Yeah. How do schools, for instance, integrate their teaching plans with the area where they live? Mm hmm. Oh, these are all questions to be considered.

Speaker 1 [00:28:34] Of course. Yeah, that's that's definitely something that came up quite often. That was a topic that was touched on. But at the moment you have quite expensive houses. And even from being from the dorpsbelangen or the bureau itself, it has been mentioned that not everybody can really afford to live in Meerstad in the first place, that it is quite expensive to get these houses and that at a certain point when does it become exclusionary that it's a bit of an enclave? How do you integrate, as you said before, also other social classes and give them kind of access to this neighborhood as well and the nature. So I guess that is access is a very big topic.

Speaker 2 [00:29:14] Yeah. And it is it will be clear that there will be large groups of houses that are near the eems Canal and more in the direction of the city of Groningen. Yeah. So there will be a social yet. You can. I could predict now that there will be a social structure of the lower class in the neighborhood of Groningen and at the far end it will be higher class. This with, as you say, expensive houses on expensive grounds and only a few can afford.

Speaker 1 [00:29:44] Yeah. Yeah.

Speaker 2 [00:29:45] So this this this transition. And as you say this transition from low to high class is already built in.

Speaker 1 [00:29:56] Yeah. I've also even like myself, just going around the neighborhood experience and you're talking to people. I've already kind of seen myself already a bit of a division. You have, for instance, people that live within the lake and the islands with like larger properties, direct access to water as opposed to then other smaller houses and the row houses where people are already living a little bit differently. And you have already divisions within that neighborhood.

Speaker 2 [00:30:21] Yeah, sure. Yeah.

Speaker 1 [00:30:23] Definitely. But I guess it all comes into play with this neighborhood and how it's going to develop into the future. Yes.

Speaker 2 [00:30:32] Well, for a spatial scientist. Absolutely. A fascinating project.

Speaker 1 [00:30:37] Yeah, absolutely. I just it's been so interesting just to kind of see all these different layers. And the more I go out, the more I talk to people, the more I get a new part of the story. And a new kind of point of view. And it definitely fills in all the blanks there.

Speaker 2 [00:30:54] Yeah.

Speaker 1 [00:30:55] Yeah.

Speaker 2 [00:30:56] Oh, it's absolutely multi-dimensional. Sure. Yeah, it is.

Speaker 1 [00:31:01] Yeah. So, I mean, is there anything else I should know about look into? Is there any aspect I haven't really covered that you think I should know about?

Speaker 2 [00:31:10] Actually, yeah, it's a little bit endless because. Yeah, it's the thing that I see the problem for you. Yeah. You should make limits to your reports wherever they are with larger delineations that you make, because you know you cannot cover everything. Of course. So it's more up to you. Better. Yeah. Yeah. I don't know your agenda exactly, so I can't answer that question.

Speaker 1 [00:31:43] Yeah, that's why my. My whole idea was to focus predominantly on nature based solutions, kind of how citizens value them, what benefits they provide, as well as, you know, the level of citizen feedback and the effect of their feedback on the design. Those are kind of my main questions I'm trying to answer and get to the bottom of. And so yeah, hence my combination of surveys to kind of get a sense of the whole neighborhood, plus these interviews as well to get the expert opinions as well to fill in the blanks.

Speaker 2 [00:32:15] Okay.

Speaker 1 [00:32:16] But yes.

Speaker 2 [00:32:17] Well, then good luck with your further work.

Speaker 1 [00:32:21] Thank you so much for your time. Thank you for your help. This has been very helpful. You're welcome. Thank you so much. Bye.