

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

| Personal information | |
|------------------------|----------------|
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| Studio | |
|---------------------------------------|---|
| Name / Theme | Flevopolder / Adapting 20 th Century Architecture |
| Teachers / tutors | Architecture: Ir. Wouter Willers / Ir. Lidwine G.K Spoormans Building Technology : Ir. Bas Gremmen Cultural Values : Dr. Marie-Therese A. van Thoor |
| Argumentation of choice of the studio | For the first year of the Master, I completed the MSC1 studio Extreme and MSC2 studio Robotic Building. Both of these are architectural engineering courses which lack depth regarding the historical and social context of their sites. The Heritage studio Flevopolder however provides a framework and tools to approach both of these and engage with the urban and social environment in greater depth. By dealing with 20 th century architecture, studio Flevopolder gives me the opportunity to address the topical case of transformation and reuse, a topic I have little experience with and wish to prepare myself for as architecture for people may lie more on transformation or small-scale interventions. |

| Graduation project | |
|--|---------------------------------|
| Title of the graduation project | Culture & Food: People's Centre |
| Goal | |
| Location: | Lelycentre |
| The posed problem, | See below |
| research questions and | See below |
| design assignment in which these result. | See below |

1.1 Problem Statement

Lelystad, a new town and a polder city developed as the capital of Flevoland starting from the 60's, was initially designed to expand to allow a population of 100000 inhabitants. It is part of the Zuiderzee Works, instituted as a reaction and solution to Amsterdam's overspill. Until the late 60's, the Zuiderzee Works planned to create four new polders but eventually it was decided that due to a reduced need for new agricultural land and space as well as due to increased environmental awareness, the fourth polder Markerwaard was left on paper. Given that one body of authority conducted this project, the cities of the polders of Zuiderzee Works capture evolution of urban planning in the Netherlands as the planners would learn from the successes and failures of one city and improve the next. Even within Lelystad, this progression is clear: the first district has a strict rational and functional planning with a mixed-function commercial core, Lelycentre. Not only are the later districts no longer rational, but they lack the comparable clusters of facilities seen in the first district. Housing the first shopping centre of the city, the first office and governmental buildings, and an elevated pedestrian and cyclist network feeding directly into said functions, Lelycentre remains unique. It is worth noting that whilst Lelystad does segregate pedestrian and vehicular traffic, only Lelycentre could be said to have a network. This is the ghost of van Eesteren's 1964 rejected schemes. Additionally, Lelycentre was originally intended to be developed into the city centre, adjacent to the main road that led from Flevopolder to Markerwaard. But as Markerwaard fell through, the orientation of the city centre was changed and Lelycentre became one of four planned sub-centres.

Nowadays Lelycentre is a complex area affected by vacancy, lack of maintenance, low income, mixed users, low density, and a lack of facilities. The users and their requirements have changed, and the few scattered independent developments fail to react to the context amicably. With increasing vacancy, the raised infrastructure whose original effectiveness is also questionable, is disjointed and underused. The aforementioned functionalist planning is clear to see as stepping past one building will reveal a cluster of office complexes when a step backwards belongs to the atmospheric domain of the shopping centre. The public space is cold and lacks space to sit; like the raised network it is used only for traffic and circulation whilst the surrounding buildings and shops offer the possibility of it being more, if the space itself offered more back. The current plans for the area are to transform the vacant offices into social housing. Creating a dialogue between the public space, the public, and the buildings is therefore a necessity in order to utilise the qualities of Lelycentre and its existing buildings and infrastructure.

1.2 Research Questions

1.2.1 Initial Research Questions

A number of questions are asked throughout the research and design process. Whilst struggling to get a grip on the factors in Lelystad and the cause of Lelycentre's apparent lack of life, main questions were: why is Lelystad, a new town developed to take in Amsterdam's overspill, declining today? The general urban analysis for Lelycentre is founded on the question: "What are the architectural qualities of Lelycentre?" and "What is of value in the area?" in reference to the necessary cultural value assessment that acts as foundation for design decisions.

1.2.2 Main Research Question

Once the basic context of the chosen intervention site was established, the main research question for the area and this project revealed itself. How can Lelycentre be made liveable and a place to be whilst maintaining the existing infrastructure and buildings that have been deemed culturally valuable? From this a masterplan has been developed in response, and will be designed further. This in turn has led to a question regarding the architectural aspects of the police station: How can the former police station, an authoritative and closed building, be transformed into an accessible public building that acts as a common resource? Furthermore, how can this 70's concrete building be made sustainable, potentially zero-energy? In what ways can the ground floor and first floor both become used public spaces?

1.3 Design Assignment

The design assignment is to develop the office and shopping core of Lelycentre into an attractive residential and shopping core. This is to adjust to the housing demands for the city, and achieving an attractive situation further demands that the public environment and facilities also be developed. The raised infrastructure and the existing buildings are maintained as they are original features. Furthermore, these buildings are not complete aliens; not only are they cemented in locals' memories, architecturally they have potential to create better quality spaces and are part of Lelystad's history if they are preserved. There are four design goals. The first goal "Local Users" is to adjust to and maintain Lelystad's existing population. The second goal "Community & City" refers to the need to engage users in their environment to ensure that the space is valued, recognised, and maintained in the public and private domain respectively, whilst enriching the in-between urban space for a residential scenario. The third goal "Circularity" encompasses economy and sustainability and seeks to create a plan that can sustain itself in the long-term. The final goal "Preservation" is simply to preserve Lelycentre's defining infrastructure and buildings. The most valued urban structures Lelycentre shopping centrum, the Smedinghuis complex (Rijkswaterstaat and the former police station), and the raised infrastructure.

Defining these goals has led to a masterplan where which targets groups that were not considered in Lelystad's urban planning such as starters, the elderly, and the youths. Starters tend to emigrate for work and opportunities and low income children and youths lack space to be in Lelycentre. Lelystad faces a disproportionate increase in elderly folk owing to its foresighted introduction of working age inhabitants in the 70's and thereafter. Facilities must adapt to these groups. New functions are added and my Design Assignment is to turn the former police station into a Culture & Food Centre, which will act as a cultural centre but also facilitates and encourages sustainable ventures. The Culture & Food Centre must maintain the key features of the former police station whilst distancing itself from its authoritative and imposing outlook. The building must be accessible and transparent, qualities that it currently lacks as it the former police station and prior to that the ZIJP authority's establishment, and must reflect the afore-mentioned goals.

Process

Method description

1.4 Method Description

There are two stages in this method: the group stage and the individual stage. The initial P1 research was carried out as a group and consisted of a booklet prepared about the development of Flevoland, the urban planning and development of Lelystad, the current state of Lelycentre, and the potential of the area. Our unfamiliarity with the context and initial observations led us to make a thorough investigation as we saw complexity in the case but had yet to identify tangible factors. Urban analysis revealed the findings mentioned in Part 1 and are supported by observations made on site. Basic building analysis such as the façade construction, structure, climate systems, program, and architectural qualities were made as a group, but more detailed analysis was later conducted individually. Collective research also included interviewing local users, stakeholders such as shop owners and a nursing home corporation, as well as the architect of the Smedinghuis complex.

Following this research, we continued to collaborate given the breadth of our research and chosen area. The intervention zone is based on the cultural value assessment and the individual projects are chosen and developed further parallel to the masterplan, which is finalised for the P2. The parallel process allows us to refine the masterplan and react and adapt our individual projects to allow for cohesive plans.

The individual design is now pushed further and the program and concept is further defined. Façade, climate, structure, and architectural interventions are put on paper and defined through references and sketches in preparation for the P2. These correspond to the four goals as well as the agreed upon scenario. Further individual goals for the Culture & Food Centre include facilitating urban farming and community activities, facilitating activities for the elderly and the youth, developing a dementia-friendly design, and adapting the building to become zero-energy or at least a passive as possible whilst remaining a low-cost facility. Following the P2, the interventions will be further developed and tested and optimised.

Literature and general practical preference

1.5 Literature and general practical preference

A defining theory for my work is the idea of the Commons. The Culture & Food Centre aims to create and maintain spaces that are neither private nor public and to offer shared resources that require communication and experimentation in order to maintain. This is true for both the public space surrounding the building which but be designed into a landscape offering food, water, and space to play and relax for multiple age groups, and must also be managed locally though the Culture & Food Centre. For this I refer not only to previous lectures by Tom Avermaete, but on work referenced in these lectures. For a stronger understanding of Heritage and Transformation, I refer to the course recommended literature Designing from Heritage. As sustainability is fundamental to architecture, I also refer heavily to resources such as Jon Kristinsson's "Integrated Sustainable Design", "Architectuur als Klimaatmachine", "Duurzame Ideeën & DCBA Methodiek", and also on the WELL Building Standard. For dementia-friendly design, I am referring to "Lost in Space".

Aalbers, K., Koning, C., & Teeuw, P. (2010). *Duurzame ideeën & DCBA methodiek (Sustainable ideas & DCBA Methodology)*. AEnas: Bostel.

Feddersen, E., & Lüdtkke, I. (Eds.). (2014). *Lost in space: Architecture and dementia*. Birkhäuser.

Kuipers, M. C., & de Jonge, W. (2017). *Designing from Heritage: Strategies for Conservation and Conversion*.

Kristinsson, J., & van den Dobbelsteen, A. (2012). *Integrated sustainable design*. Delftdigitalpress.

Yanovshtchinsky, V., & Huijbers, K. Dobbelsteen, A. vd (2013). *Architectuur als klimaatmachine: Handboek voor duurzaam comfort zonder stekker*. Amsterdam: SUN.

Reflection

Relevance

1.6 Relevance

The graduation project Culture & Food: People's Centre approaches the currently under-recognised architecture of the 20th as heritage as a mechanism of this studio. This can act as an early attempt at working with recent history and already beginning to understand its qualities and values.

Furthermore, with the exception of Peter Krol's work, little architectural attention has been given to Lelystad and Lelycentre in particular, and the possibility of preservation is mostly unconsidered. Our collective masterplan in combination with the individual buildings may trigger conversation regarding the value of Smedinghuis and Lelycentre shopping centrum. Furthermore, the plan commandeers public spaces that have little attractive quality and aims to reengineer the landscape to function for a variety of users. The scientific relevance of this work is the application of technological interventions to reuse and adapt the building, making at as low-energy as possible.

Time planning

| Week | Work To Do | Program according to Schedule |
|-----------------|---|---------------------------------------|
| 22/01/19 | P2 Presentation | P2 Presentation |
| 31/01/19 | Develop Facades and Floorplans 1:200 | |
| 07/02/19 | Water, Energy, Waste | |
| 14/02/19 | Fragments concept | Workshop Fragments |
| 21/02/19 | Fragments 1:20 | Tutoring Fragments |
| 28/02/19 | BT 1:20 Model, 1:5 details | BT Workshop Fragments |
| 11/03/19 | Work on Reflection, refine plans further, cult. Val | |
| 14/03/19 | Cultural Value schemes, Continue with draft ref. | Cultural Value |
| 21/03/19 | Draft Reflection , renders, 1:100 plans final (p3) | Tutoring, Draft Reflection Due |
| 28/03/19 | Model 1:100, production | Tutoring |
| 04/04/19 | P3 Presentation | P3 Presentation |
| 11/04/19 | Excursion, respond to feedback | |
| 18/04/19 | Feedback response, new changes, 1:100 drawings | Tutoring |
| 25/04/19 | Rehashing work 1:20, 1:5 | Tutoring on presentation |
| 02/05/19 | Renders | Tutoring + Cultural Value Consult |
| 09/05/19 | Renders | Tutoring |
| 16/05/19 | P4 presentations | P4 presentations |
| 23/05/19 | P4 presentations | P4 presentations |
| 30/05/19 | Redevelop, address feedback | Tutoring |
| 06/06/19 | Produce Model 1:100 | Tutoring |
| 13/06/19 | Produce Final Products | Tutoring |

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|-----------------|----------------------------|-------------------------|
| 20/06/19 | Produce Final Presentation | Tutoring |
| 27/06/19 | P5 presentations | P5 presentations |
| 04/07/19 | P5 presentations | P5 presentations |