

"Towards a dementia proof society" Designing for Care

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# Personal Information



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Studio

Main mentor Second mentor Third mentor Exam commission AR3AD133 - Designing for Care

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The Studio 'Designing for Care – towards an Inclusive Living Environment' focuses on the topic of the daily environment for the elderly who are in need of care. One of those elderly people was my grandfather. When I was 18 years old, my grandfather moved to a nursery home. He suffered from Alzheimer's disease which developed quickly from a light to heavy version of dementia. This made a strong impression on me. The person he once was disappeared slowly.

The care facility where my grandfather stayed was very outdated. Although the building did not function optimal for people with dementia (designed with its long small corridors, small bathrooms and old-fashioned design), the care that was given was with great love, patience and respect for my grandfather. I admired those who took care of him, in this final stage of his life.

In the Master programme at TU Delft, we are expected to take a 'role' in the world of architecture. The last few years have made clear to me that designing for the vulnerable has become something I want to do. Besides participating in the Msc2 studio 'A Second Youth - towards an inclusive living environment', I also did an internship at EGM Architects where I helped designing several care institutions.



#### The posed problem

The amount of elderly in the Netherlands will increase significantly in the upcoming years. According to the CBS (2018) by 2030 a quarter of the Dutch population will be aged 65 or older. Due to the growing number of elderly people, the number of elderly people with dementia is also increasing. Where in 2018 'only' 270.000 people suffered from dementia, this is expected to be over 620.000 people in 2050 (Alzheimer Nederland, 2018). An increase of 230% !

When suffering from dementia, in the Netherlands, you have to live at home as long as possible (due to the separation of living and care). As soon as the person 'poses a danger to herself', she has to be transferred to an enclosed care facility where she will spend the last phase of her life. For someone with dementia, moving is catastrophic and can even aggravate the disease process. In addition, someone who is sick does not have to be deprived from her freedom.

The current built environment does not respond to the needs and desires of elderly, especially for those who suffer from dementia. Therefore, we have to look into new living concepts that will fit the needs of the elderly, now and in the future.

During the fieldwork week, I stayed in Huis Assendorp in Zwolle. There I met a woman named Erica. Erica is suffering from dementia. Because of her dementia she had to move to an enclosed care facility and I thought this to be very unfair since Huis Assendorp supposed to be a living environment where you could stay for the rest of your life. This was an issue that I wanted to get involved with.

#### **Research question**

To what extend can the concept of an open society help creating an architectural setting in which people with dementia no longer have to move to an enclosed care facility?

For a more comprehensive overview of the research questions, see p. 7.

#### Design assignment

For my graduation project I will focus on elderly with dementia and how to make them a valuable part of our society (again). My goal is to develop a new (open) concept where people can live until they die, even if they suffer from dementia. An environment where people take care for each other and where people with dementia are seen as a valuable part of society, instead of a prisoner or a helpless child; an inclusive environment.

Of course, architecture alone cannot create this. A different mindset is needed of the co-residents, caretakers and society. Yet, I strongly believe that architecture can create (and is essential in creating) the preconditions that make such a caring concept possible.





Witte rozenstraat 21, 2311 XS Leiden, Zuid-Holland

### Location

Out of five given locations, we had to choose one plot. The location I have chosen for my graduation studio is located in Leiden, Zuid-Holland. This plot is enclosed in a residential area. Although the plot is close to the centre of Leiden (approx. 1 km away) it is a quiet area. Due to the low-rise, post war period houses, the neighbourhood has a friendly atmosphere. The water next to the plot is connected with the canals of Leiden. On the other side of the water there is a 10 story building with dorm rooms.



# "Towards a dementia proof society"



Designing for Care | Graduation Studio Dwelling



### Architecture

Alexander, C. (1977). A pattern language: towns, buildings, construction. Oxford university press. van den Heuvel, D. (Ed.). (2018). Jaap Bakema and the open society. Archis Publishers. Rapoport, A. (1990). The meaning of the built environment: A nonverbal communication approach.

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Sennett, R. (2017). The open city. In The Post-Urban World (pp. 97-106). Routledge.

#### Dementia

Lentis. (n.d.). *Dementie*. Retrieved from https://www.lentis.nl/probleem/dementie/ Nillesen, J., & Opitz, S. (2013). *Dimensie voor dementie. Kleinschalige woonvormen voor dementerende mensen.* Wiegerinck architectuur stedenbouw

Stichting Alzheimer Nederland. (2018). *Factsheet dementie per gemeente*. Retrieved from https://www.alzheimer-nederland.nl/sites/default/files/directupload/factsheet-dementie-per-gemeente.pdf

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Stichting Reigershoeve. (2014). Informatie brochure over het liefdevol ondersteunen van mensen met dementie.

#### Elderly

Centraal Bureau voor de Statistiek. (2018). *Prognose 18 miljoen inwoners in 2029.* Retrieved from https://www.cbs.nl/nl-nl/nieuws/2018/51/prognose-18-miljoen-inwoners-in-2029

#### Healing environments

Eijkelenboom, A., & Bluyssen, P. M. (2019). Comfort and health of patients and staff, related to the physical environment of different departments in hospitals: a literature review. Intelligent Buildings International, 1-19.

Huisman, E. R., Morales, E., van Hoof, J., & Kort, H. S. (2012). *Healing environment: A review of the impact of physical environmental factors on users*. Building and environment, 58, 70-80.

Yoo, I. Y. (2015). A Study on Healing Environmental Factors in the Elderly Patients with Long-Term Care. International Journal of Bio-Science and Bio-Technology, 7(5), 267-276.

# Others

AlleCijfers.nl (2018). *Leiden Vreewijk*. Retrieved from https://allecijfers.nl/buurt/vreewijk-leiden/ Lawinsider. (n.d.). *Definition of enclosed locked facility*. Retrieved from: https://www.lawinsider. com/dictionary/enclosed-locked-facility

Technische Universiteit Delft. (2019). Graduation Manual: Master of Science Architecture Urbanism & Building Sciences.



#### Images:

Burokade. (n.d.). *View of parts of the Hogeweyk*. Retrieved from https://www.burokade.nl/projecten/zorgwijk-de-hogeweyk/

Fairwooth. (2015). View of two homes at the Reigershoeve Retrieved November 2019 from http://www.fairwooth.com/projecten/woonzorgboerderij-reigershoeve-heemskerk/



The increasing amount of elderly is undeniably a nation-wide problem. The challenges this aging society brings upon us, goes beyond politics. It's an interdisciplinary challenge. We have to take matters into our own hands and rethink the current living environment of elderly. We are all getting older which means that the topic will sooner or later affect all of us.

The studio 'Designing for Care' stimulates the students to think of new concepts on 'how elderly will live in the future' and is therefore highly relevant for the master of architecture and especially for the chair of dwelling. But the studio goes beyond the field of architecture. With its human centered approach other disciplines such as healthcare, anthropology, psychology urbanism are being consulted. This and

humanistic and anthropological approach helps to understand our target group, and is something I would recommend every architect in the field to do.

For my graduation project I will focus on elderly with dementia. With the increase of elderly, the number of elderly with dementia is also increasing. Because a cure for dementia is still not found, this group of elderly needs some special attention. In the Netherlands only people with the heaviest care indication get a place in a care home. This also means that a very large proportion of people suffering from dementia continue to live at home, in an environment that is not suitable for dementia. They fall between two stools. The current system for people with dementia is untenable and in need of new solutions to become future-proof.



Underneath a short overview is given of the planning and expected products for the upcoming months. This overview is based on the Graduation Manual AUBS (2019, p. 18).

# P2 Presentation (16-01-2020)

- $\cdot$  Graduation plan based on template
- $\cdot$  Urban draft / master plan (on an appropriate scale)
- Program of requirement
- · Draft design (plans, sections, elevations) 1:500

In between P2 and P3 it is time to start with the design. Besides designing, I would like to revisit the site a few times to get to know the neighbourhood even better. Also, I would like to talk with an expert about designing for dementia. In addition I will do an extra research about Biophellic design to support my design. Start with the draft reflection.

# P3 Presentation (8-04-2020)

- · Draft reflection (see appendix 3)
- · Plans, façades, cross-cuts, 1:200
- · Part of the building, plan and cross-cut (on an appropriate scale)
- · Façade fragment with horizontal and vertical. cross-cut (on an appropriate scale)
- $\cdot$  Set up details

Finalising the design and reflection.

# P4 Presentation (20-05-2020)

- $\cdot$  Theoretic and thematic support of research and design
- $\cdot$  Final reflection on architectonic and social relevance (see appendix 3)
- · Site 1:5000 / 1:1000
- Plan ground level 1:500
- · Plans elevations, sections 1:200 / 1:100
- $\cdot$  Part of the building, plan and drawings 1:50
- · Façade fragment with horizontal and vertical cross-cut (on an appropriate scale)
- $\cdot$  Details

# P5 Presentation (between 20-06-2020 and 10-07-2020)

Identical to P4