

Graduation Plan



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	
Name	Maarten Verheij
Student number	4881664

Studio		
Name / Theme	AR3AD100 Advanced Housing Design	
Main mentor	Harald Mooij Robbert Guis	Architecture, housing Architecture, housing
Second mentor	The BT mentor isn't yet known.	
Argumentation of choice of the studio	Housing design was a topic I hadn't explored in other parts of my study to my satisfaction. In my opinion, housing is the most fundamental form of architecture. In the Netherlands there is a housing problem, a shortage and a lack of quality, so how we tackle this problem interests me. In particular, I'm interested in finding ways to add individual freedom and diversity to standardised housing.	

Graduation project	
Title of the graduation project	Sociaal en eigen in Mooi Mokum
Goal	
Location:	Minervahaven Amsterdam
The posed problem,	<p>Contemporary social housing development in the Netherlands often prioritises standardisation over progressive and imaginative design, resulting in an undesirable dullness of the urban environment.</p> <p>This is a problem not only because it creates an urban landscape that is boring for the people living in it; standardised housing plans also impose a certain way of living onto residents. Moreover, conformity hinders progress in the architectural field.</p>

	In short, there is an <u>unwanted lack of architectural diversity and individual living style and freedom.</u>
research questions and	<p>Main question: How can a large-scale social housing complex with standardised elements still have aspects of individuality?</p> <p>Sub questions:</p> <ol style="list-style-type: none"> 1. What are desirable elements of standardisation that support efficiency, functionality and sustainability of a large-scale social housing complex? 2. To what extent can a large-scale social housing complex create a cohesive, yet visually and spatially diverse environment that reflects the unique identities of its users? 3. To what extent can a large-scale social housing complex stimulate and accommodate individual styles of living? 4. To what extent oppose/strengthen aspects of standardisation and individuality each other in a design for a large-scale social housing complex?
design assignment in which these result.	<p>A <u>design</u> for a large-scale social housing complex at the site of Minervahaven in Amsterdam, with following <u>requirements</u>:</p> <ul style="list-style-type: none"> – density at least 200 houses / hectare – standardisation elements to support circularity (design for disassembly/adaptability), affordability, mass production & aesthetic coherence – individuality aspects to support visual/spatial diversity, individual styles of living, diversity of households – additional subjects: nature inclusivity, collective spaces, advantages and disadvantages of high density urban life

Process

Method description

Literature research

- on history, state of the art and future standardisation
- on architectural design approaches of standardisation that enable individuality
- on architectural design approaches to individuality

Specification of individuality design categories

Specification of requirements for standardisation and individuality based on the literature

Case study analysis using the categories and requirements

Research by design using the categories and requirements

Participatory experiment to test personal design ideas in practice

Literature and general practical references

Literature (selection):

Anastasiades, K., Goffin, J., Rinke, M., Buyle, M., Audenaert, A., & Blom, J. (2021). Standardisation: An Essential Enabler for the Circular Reuse of Construction Components? A Trajectory for a Cleaner European Construction Industry. *Journal of Cleaner Production* 298, 126864 (March), 2-15.
<http://dx.doi.org/10.1016/j.jclepro.2021.126864>

Berlage, H.P. (1918). *Normalisatie in Woningbouw*. Rotterdam: W. L. & J. Brusse.

Habraken, N.J. (1961). *De Draggers en de Mensen: het Einde van de Massawoningbouw*. Amsterdam: Scheltema & Holkema.

Schneider, F. (2011). The Floor Plan Idea. *Floor Plan Manual: Housing* (eds. O. Heckmann & F. Schneider), 30-35. Basel: Walter de Gruyter.

Trencher, M. (2008). *The Individual and Mass Housing: the Delicate Balance*. Cambridge: University Press, 2008.

A selection of multiple DASH articles, such as:

Frijters, E., & Klijn, O. (2018). Generalizations are Passé: Interview with Edwin Oostmeijer. *DASH / Delft Architectural Studies on Housing*, 3(04), 48–53. Retrieved from <https://journals.open.tudelft.nl/dash/article/view/4621>

van Hoogstraten, D. (2018). Master of Your Own Home: Time and Hierarchy in the Housing of John Habraken and the SAR. *DASH / Delft Architectural Studies on Housing*, 3(04), 4–19. Retrieved from <https://journals.open.tudelft.nl/dash/article/view/4614>

van den Heuvel, D. (2018). Piet Blom's Domesticated Superstructures. *DASH | Delft Architectural Studies on Housing*, 3(05), 56–70. Retrieved from <https://journals.open.tudelft.nl/dash/article/view/4644>

Case studies:

Jo van den Broek (1934). *De Eendracht*. Rotterdam.

F.J. van der Werf (1967). *Molenvliet*. Papendrecht.

Piet Blom (1984). *Stadsvernieuwing Rotterdam Spaansekade*. Rotterdam.

Mecanoo (1985). *Kruisplein*. Rotterdam.

Hans Kollhoff & Christian Rapp (1994). *Pireaus*. Amsterdam.

Dag Boutsen & Lucien Kroll (2005). *De Zilvervloot*. Dordrecht.

VMX Architects (2010). *Ithaka*. Almere.

MEI architects and planners (2019). *Fenix I*. Rotterdam.

Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

The topic of standardisation and individuality is a core subject in housing architecture. It has been debated at least since the start of the industrialization age. The studio 'Advanced Housing Design' is a perfect environment to study this subject, and the location Amsterdam and cooperation with the designers of the municipality offer inspiring practical opportunities. Discussion with my supervisors, with their experience and expertise in housing design, have been of great help. Housing design is central in the track Architecture and within the master Architecture, Urbanism and Building Sciences.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

Social: Housing is an ongoing problem for many in the Netherlands, especially so in Amsterdam. Cities are growing, and there is a shortage of affordable housing of good quality. The problem goes beyond the need of quick development, and new ways of housing in the future have to be explored.

Professional: As students of the master track Architecture, we are aspiring architects, who will address the puzzle of standardisation and individuality. There is potential for architects to be a facilitator for beautiful, affordable and effective housing that supports its inhabitants.

Scientific: Within the scientific world, this topic is and has been often addressed. For instance, in 1918, Berlage published in which he recognises the necessity for standardisation but acknowledges and shares the concerns of the workers and architects about suppressing the individual needs and wishes and the lack of architectural diversity. And more recently, in 2011, an edition of the DASH journal was dedicated to the discussion of mass production and the ideal floor plan.