

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	
Name	Kyra van den Berg
Student number	4293363
Telephone number	
Private e-mail address	

Studio		
Name / Theme	Urban Development Management (UDM)/ not applicable	
Main mentor	Dr. K.B.J. (Karel) Van den Berghe	Urban Development Management
Second mentor	Dr. E. (Erik) Louw	Grondbeleid
Argumentation of choice of the studio	<p>Already in the Bachelor it was clear to me I like the human aspect of our field. Making accurate technical details is not my cup of tea, but addressing societal problems and developing urban strategies is something I really enjoy. Later I see myself working on urban projects that make a social impact, putting the perspective of the users first. Therefore, the choice for UDM as studio was easily made. What I like about urban area developments is that they are full of challenges, interesting complexities and interdependencies. The fact I enjoy thinking in systems, stakeholders and scenario's matches therefore well with UDM. Finally, MBE is a beautiful study that offers me a broad range of knowledge and skills that I would like to use for the better; In urban planning I see many opportunities to do so!</p>	

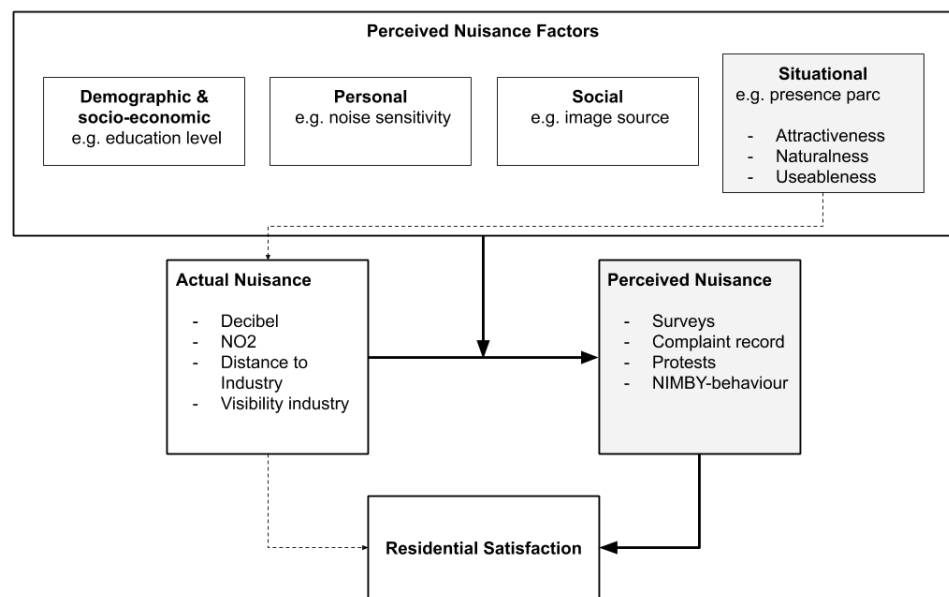
Graduation project	
Title of the graduation project	<p>Industry and Housing: Clash or Match? A qualitative study into resident's experience of living close to industry and how this affects their perception of nuisance and satisfaction.</p>
Goal	
Location:	TU Delft/ Brink Management en Advies, Rotterdam
The posed problem,	<p>Urbanization in coastal areas and port cities is one of the major issues of today. Where previously natural environments and agriculture areas have made place for harbor and urban activities, currently these environments are increasingly protected and the spatial competition in port cities is rising. Moreover, due to both geographical and functional separation, the spatial competition between port and city is not easily resolved. The port needs more space for their cargo, while the city needs more space for housing. As a result, urban planning of port cities has become a rather conflictual, slow and costly process.</p> <p>To deal with these urban planning challenges and at the same time strengthen the competitive edge of port cities, mixing different uses on building or area level is often put forward as a promising solution. Researchers and practitioners highlight mixed use developments have many benefits regarding urban quality, livability and sustainability.</p>

That said, the actual success of mixed-use areas could be questioned. Higher goals are not always reached, cost-overruns commonly occur and incompatible functions are not always sufficiently managed. It could further be noticed, that combining industry and housing in one area remains a challenging task. In modern planning practice undesired relocations of industries are not uncommon and it is hypothesized residential nuisance plays an important role in this.

Literature findings & Conceptual model & research questions

Main Literature Findings
 Many studies mention the person-environment relationship and explain that the environment and the users inside the environment interact and influence each other, either physically, socially economically and culturally. In addition, researchers seem to agree that objectivity and subjectivity play a role in this relationship and they generally recommend to apply both objective and subjective indicators in research. Following this recommendation, the objective and subjective character of nuisance was investigated and a distinction was made between two types of nuisance: actual and perceived nuisance. The first is about the objective level of nuisance exposed to the receiver, while the latter is about the subjective level of nuisance perceived by the receiver. To elaborate on this division, three theories are discussed. The first theory is about the interplay of satisfaction and perceived nuisance and how they together add up to a level of overall satisfaction. The second theory describes the importance of supporting relaxation and related mental processes to mitigate perceived nuisance. In particular the role of visual attractiveness, naturalness and usability for restoring activities of the environment is considered important in this respect. The third theory described a variety of factors that could impact the perception of nuisance, likewise named “perceived nuisance factors”. The factors could be divided in four groups; demographic and socio-economic factors, personal factors, social factors and situational factors. The last group could be influenced by the urban planning field and is therefore the most relevant for this research.

Conceptual model (based on Literature study)



	<p>Main Research Question (based on conceptual model) <i>“How do residents experience living in an area close to industry, and, what urban planning recommendations, related to visual attractiveness, naturalness, useableness and nuisance, could be formulated accordingly?”</i></p> <p>Sub Questions (based on main research question)</p> <p>Situational “perceived nuisance” factors</p> <ul style="list-style-type: none"> - How do residents experience their living environment respect to naturalness? - How do residents experience their living environment respect to visual attractiveness? - How do residents living close to industry experience their living environment respect to useableness for restoring activities? - Which places are experienced as natural by the residents? why? - Which places are experienced as visually attractive by the residents? why? - Which places are used for restoring activities by residents why? - What situational aspect are of importance for residents in order to consider a place as natural? - What situational aspects are of importance for residents in order to judge a place visually attractive? - What situational aspects are of importance for residents in order to use a place for restoring activities? <p>Perceived nuisance</p> <ul style="list-style-type: none"> - To what extend do residents perceive nuisance caused by industry? - What type of nuisance do they perceive? - To what extend is a resident’s perception of the situation regarding visual attractiveness, naturalness and useableness reflected in a mitigated perceived nuisance?
design assignment in which these result.	<i>Not applicable</i>

Process
Method description
<p>Type of study: qualitative Method: Focus groups and socio-spacial schema</p> <ul style="list-style-type: none"> - Groups of 4-5 residents - Duration per focus group is 2 hours - At least one focus group in Pernis (relatively low perceived nuisance) - At least one focus group in Hoek van Holland (relatively high perceived nuisance)

- Residents selection criteria: that are Dutch speaking, live in area that is exposed to industrial nuisance, 18 years or older, live for at least 6 months in Pernis or Hoek van Holland.

Technique:

- Site visit
- Desktop research
- Convenience sampling
- If convenience sampling appears to be insufficient apply snowball sampling

Literature and general practical experience

Literature consulted so far:

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General practical experience consulted so far:

Not applicable

Reflection**Relation graduation topic and master track MBE**

By conducting a research individually, I want to demonstrate I am able to work independently and academically as expected from students from the TU Delft. Additionally, I would like to meet the final learning goals of the MBE master track; having a decent understanding about managing urban developments and construction processes and all the complexities involved. In general terms, this graduation project helps me to understand better how to deal with seemingly conflictual uses in urban planning and how to steer on higher satisfaction among various users. More specifically, it helps me to understand how residents perceive nuisance caused by industry, what situational factors could minimize this perception and how to support satisfaction in residential areas close to industry. In MBE we have learned that the users are the driver of the real estate demand cycle. If we construct the built environment in a way that satisfies the user, demand, value creation and increased supply will follow. The graduation's focus on how residents experience their living environment matches well with this theory and therefore the topic proves to be strongly related to MBE.

Relation graduation topic and master program AUBS

Characteristic for the master program AUBS is its interdisciplinary approach. Various perspectives are included in the program and knowledge is derived from design, technical and social sciences. Similarly, my graduation research involves also a blend of multiple science fields. The port city issues relate to urban planning, the literature study correlates to spatial and social sciences, setting up the focus groups requires management skills and the formulated design principles/urban planning recommendations in the end of the research could be useful in urban planning and urban design practice.

Relevance of Graduation work in the larger social, professional and scientific framework

Reviewing existing studies on mixed use and residential satisfaction some limitations could be observed. Firstly, there is a lack of local solutions to deal with conflicting functions in mixed-use areas. Among existing studies general statements are made, like "public space is critical", but specific recommendations related to the design of public space are omitted. Only a few studies looked at the spatial characteristics of mixed-use areas and were able to identify spatial guidelines accordingly. Secondly, to my knowledge, no qualitative research effort has been made to investigate the residential experience of residents living close to industry, considering both naturalness, useableness and nuisance of that specific living environment. Thirdly, in existing research relatively much attention is paid to smaller scale and fine-grained mixed-use areas, the issues related to larger scale areas including industrial and residential areas are unexposed. Finally, there is still rather limited knowledge about why people feel annoyed by industrial activities and the role spatial design could play in mitigating this annoyance. This research aims to fill this knowledge gap.