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](mailto: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:

<table>
<thead>
<tr>
<th>Personal information</th>
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<tbody>
<tr>
<td><strong>Name</strong></td>
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<tr>
<td><strong>Student number</strong></td>
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<tr>
<td><strong>Telephone number</strong></td>
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<td><strong>Private e-mail address</strong></td>
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<table>
<thead>
<tr>
<th>Studio</th>
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<tbody>
<tr>
<td><strong>Name / Theme</strong></td>
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<tr>
<td><strong>Teachers / tutors</strong></td>
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<td><strong>Argumentation of choice of the studio</strong></td>
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The concept of heritage is very different in Taiwan from the studio of “Heritage and Architecture”. In Taiwan, heritage is mainly about entire preservation, and only focuses on the ones with great historical values. The reuse and revitalization are merely applied.

The main reason of choosing the studio of “Heritage and Architecture” is because the studio focuses rather only on preservation, but emphasizes on revitalization with new introduced programs, giving a second life of continuation. There are more building transformations within existing context these years. Under this circumstance of building renewal, the transformation inherits richer historical backgrounds, which supports later intervention decisions. More historical layers can be cherished in different aspects; the transformation increases the diversity and reuse capacity in the urban context.
<table>
<thead>
<tr>
<th>Graduation project</th>
<th>Reborn of Green Fenix</th>
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<tbody>
<tr>
<td>Title of the graduation project</td>
<td>Transformation of industrial heritage as a new cultural and educational catalyst in Rotterdam</td>
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## Goal

<table>
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<tr>
<th>Location</th>
<th>Fenix II (Veerlaan 19, Rotterdam)</th>
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### The Posed Problems

#### Urban Level

Rotterdam industrial harbors were once very active, and concentrated on New Maas River near by city center. With city expansion, industrial harbor activities have shifted towards west side of Rotterdam. The function of industrial harbor no longer suits within the context, where has changed mainly to dwelling, offices and few commercial area.

Cultural and educational gathering points are mainly located on the north side of New Maas River. On the south side of New Maas River, the existing functions are lack of diversity and these cultural and educational functions are indeed required, in order to create a better urban condition in diversity. Moreover, with the city development, a sufficient integration with natural environment has been overlooked and the current situation is segregated.

#### Building Level

Fenix II is one part of reconstruction of San Francisco warehouse. The building, San Francisco warehouse, was built in 1916. It was once an entirety and the longest warehouse in Europe. However, as a survivor of WWII and fire damage, the entirety has been destroyed and separated into two parts: Fenix I and Fenix II.

#### Overall Issues

The previous glory of lively activities no longer exists; the connection with city center and use of waterfront are missing; the integration with natural environment should be relinked; the entirety of San Francisco warehouse should be addressed and shown the history layers.

(Please also see appendix for more information)
## Research Questions

### Main question

How can Fenix II act as a catalyst to revitalize the glory history layers of liveliness from previous industrial harbor?

### Sub questions

- How to act as the second cultural and educational gathering point in Rotterdam, from the south of New Maas River?
- How to reconnect the entirety of San Francisco warehouse? How to show the continuity within the aspects of forms and functions?
- What is the hierarchy of existing values? During the intervention, which elements should be preserved, transformed or demolished?
- Which forms of natural elements can provide better relation and integration within city context?
- How can these natural integrations influence public health and surrounding quality?
- How can this method be duplicable in the city and increase overall natural elements in the future?

(Please also see appendix for more information)

## Design Assignment

The transformation of the building is rich. The intervention will indicate these layers in forms and functions, and create a new phase of continuation. The original elements should be preserved as much as possible which express the essential character of Fenix II. The reconnection of Fenix I and Fenix II will be addressed, in order to emphasize the history layer as an entirety. Moreover, the reconnection will be the gate of intervention.

Fenix II is located at the front seat of waterside across New Maas River. With advantages of existing public functions on Kop van Zuid, Fenix II has a great potential to attract visitors, influences as cluster-effect, and create a better relation with the city center again. Fenix II requires public programs in aspects of culture and education, in order to act as catalyst, brings back liveliness, and relink those missing relations mentioned above.

The waterfront on the north side and Deliplein square on the south side of Fenix II can be seen as supporting space for Fenix II. A larger scale of integration with natural elements will be placed, as well as the connection in between Fenix I and Fenix II.

(Please also see appendix for more information)
There are 3 major parts of analyses: architectural analyses, building technology, and culture values. In order to have comprehensive overall understanding, architectural and culture values analyses contain 3 different scales, starting from: urban level, site level, and building level; building technology analyses focus on building level.

There was very limited provided information on TU Delft Black Board. The first step was to visit Rotterdam City Archive to gather essential information as much as possible, such as previous drawings and photos from different periods. The drawings have been remade personally. Moreover, visit of Nieuwe Instituut for the archives was planned, mainly for the background of architect, C. N. van Goor, who designed San Francisco warehouse (original building for Fenix I and Fenix II). Secondly, Cultural Value Matrix and Chronmapping have been applied to analyze and give the hierarchy of values in different aspects: from the past to the present, and from tangible physical facts to intangible historical layers and spatial experience. Finally, many times of site visiting was the important input as well.

With these observations, analyses and defined values, it gives a clear point of view to building essence in different perspectives; it is the foundation for the future design. Based on previous analyses, the intervention starts with the hierarchy of values: preserving the highest existing values, integrating possible opportunities, and deciding demolishment. The design fascination of integration natural elements within city context has been proceeded along intervention. Moreover, case studies were made, in terms of functions and FTA. Field trips of several projects were also arranged to experience the actual spatial quality and use of the space.

(Please also see appendix for more information)

Literature and general practical preference
Main resources of original drawings and old photos of San Francisco warehouse and Rijnhaven

Rotterdam City Archives

Literature

• Anglès, M. (2010). In favour of public space: Ten years of the European prize for urban public space. Barcelona: Centre de Cultura Contemporània de Barcelona etc..

Reports and magazine


Case studies

· Cent Quatre/ José-Manuel Gonçalvès
· Concrete at Alserkal Avenue / OMA
· FRAC Dunkerque / Lacaton & Vassal
· Gehua Youth and Cultural Center / Open Architecture
· High Line/ Diller Scofidio + Renfro
· La Halle-aux-Sucres/ Pierre-Louis Faloci
· MazelTov - 81Font / Studio Arkitekter
· Rhone River Banks/ Landscape Architecture: IN SITU Architectes Paysagistes
· St. Ann's Warehouse / Marvel Architects
· SESC Pompeia / Lina Bo Bardi
· Urban Outfitters Corporate Campus / MSR Design
· Water Square Bentemplein/ DE URBANISTEN
Reflection

Relevance

The transformation of existing building increases the diversity of city development. The transformation not only inherits cultural values, but also gives an opportunity of reuse than demolishment. Prolonging the life of a building, it can be seen as one of sustainable methods emphasized nowadays. A successful transformation also relies on the integration of current building technology, in the aspects of preservation, alternation, and demolishment.

With the new introduced cultural and educational programs, Fenix II can act as catalyst to revitalize urban condition, on the south side of New Maas River. The integration with natural elements increases public health physically and mentally; the surrounding quality will be also increased. Moreover, Fenix II can be an example of integration with natural elements within city context, and be duplicated in the city to increase overall natural elements in the future.

Time planning

Please see in the following page.
Graduation Year Schedule
4508297. CHENG, Chieh-Hsin

Design Main Focus
Relation to the architectural history
Sustainability
Connection of river and hinterland

P1 Research and Analysis
Topics/Focus established
Design statement

Week 3.1
Feb
Mar
Apr
Week 3.1 Week 3.2 Week 3.3 Week 3.4 Week 3.5 Week 3.6 Week 3.7 Week 3.8 Week 3.9 Week 3.10

1. Research and Analysis
Topics/Focus established

2. Architecture Analysis-matrix

3. Value evaluation- historical, urban, building(matrix)

4. Reference, case study

5. First design proposal, fascination
Early stage of design

6. Research Methods

7. History Thesis

8. Final

P2 Design Process

Concept
Integration between new and old

Programs

May
Week 4.1 Week 4.2 Week 4.3 Week 4.4 Week 4.5 Week 4.6 Week 4.7 Week 4.8 Week 4.9 Week 4.10

Urban draft/ master plan
1:1000/1:500

Intervention- plan, section, elevation 1:200

P2 Final

6/20

P3 Design reflection, modification and final

Urban draft/ master plan
1:1000/1:500

Plan ground level 1:500

Plan section elevation 1:100/1:200

Partial building- plan, cross cut 1:50

Model final

Site 1:1000

P4 Design final stage

Master plan 1:1000

Plan ground level 1:500

Plan section elevation 1:100/1:200

Partial building- plan, cross cut 1:50

Presentation prepare

12/5-12/16

P5 Final presentation

Minor improvements for drawings

presentation prepare

P5 Final

1/25-2/3

Model final

Building 1:200*0.5

Partial building 1:20

Detail 1:5

P5 Final presentation

Minor improvements for drawings

presentation prepare

Model final

Building 1:200*0.5

Partial building 1:20

Detail 1:5