PREFACE

Industrial Bath is developed as the final thesis on the 10th semester spring 2008, at the specialization program in Architectural Design at Aalborg University, Institute of Architecture and Design.

The thinking of the project is influenced by the process of moving through serial space. And more specifically the building is long and thin.
The layout of the report is set up in spirit of this, as long folded strips of paper.

Present report is divided into ten chapters [see CONTENTS] which does not include this preliminary chapter.
In broad terms the first chapters [from THE PLACE to CONSTRUCTION] explain the ideas and physical form of the project, while the two latter chapters explore the process.
Current chapter introduces the background for the project.

I want to thank my supervisors Claus Bonderup and Rasmus Lund Jensen who supported my ideas and helped me develop them through the process.
Also thanks to the Hans Bruun Nissen from Aalborg Portland who has helped with advise and access to the grounds of Portland, and to Nicholas Flint and Eigil V. Sørensen from the Department of Civil Engineering for help with the concrete cast process.

Indicators used for references:

[] Reference text or section in this report.
|| Reference sources.

CONTENTS

COLOFON

Project title:	Industrial Bath
Project theme:	Public Baths
Semester:	10th semester ARCH
Student:	Hans Bruun Olesen
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Project period:	04.02 - 04.06.2008
Chapters:	10
Pages:	114

SUMMARY

PUBLIC BATH

The Industrial Bath concept is invented from scratch as a project that utilizes existing qualities of Aalborg to shape a strong place in the city.

Industrial Bath addresses the potential of the huge cement production plant Aalborg Portland, on the eastern edge of the city.
Through a sketch project for a public bath it is the ambition to establish a strong bodily experience inside this unique place of Denmark.

The project proposes to utilize the surplus resources of industrial production - e.g. heat, water and transformed landscape to shape the experience of the baths, and furthermore to explore the product of production - cement - as the architectural framework for the building.

Thus the building renders visible the qualities of concrete and narrates Portland's current and past history for the people visiting the bath. In other words: The project functions as a showroom for the industrial production.

The layout of the specific building is arranged according to an axis through the Portland landscape. The building is situated in a hill above the large fresh water lake of the area. The building plan contains a series of spaces of different temperature and atmosphere.

In a larger perspective, Industrial Bath challenges the relationship between the living breathing industry and the rest of the Aalborg.
The project explores the possibilities for people to journey into an unknown place of the city.

INTRODUCTION

INDUSTRIAL BATH

Early 2007 I visited the grounds of Aalborg Portland. I was breathtaken encountering this place that to me had been something distant in the horizon of the city.
The excavated landscape, the monolithic buildings bridged by light staircases and the tall vertical chimneys poring out white smoke fascinated me.
However the starting point of this project was encountering the huge rotating ovens that burn chalk into cement. The fact that these giant cylinders thoughtlessly radiate surplus heat into the atmosphere, struck me as something with a huge potential.
At that time I was not certain how?

Later that summer, in the Hungarian capital of Budapest, the pieces of the puzzle started to fit together.
The people of Budapest are fortunate as they are able to utilize the thermal forces from the underground for heated baths complexes inside their capital city.
A visit to one of these secluded places is like being physically and mentally reborn. People use them as part of the daily life for relaxation and as informal meeting places.

As there are no thermal forces near the earth's crust in Denmark Industrial bath proposes to utilize the surplus heat of production for a public bath complex on the grounds of Aalborg Portland.
A bath that narrates the story of this great landscape on the edge of the city and highlight the qualities of the product of production - the Aalborg Portland cement.

PERSPECTIVE

There exists a grand master plan (from 1987) for the utilization of most of the Portland areas in the year 2050. This year machines excavating chalk stand silent, and the landscape is returned to the city. |1|
The plan suggests a recreational park on the leftovers of what used to be industry. Similar - yet much larger in scale - to other former chalk excavation sites of western Aalborg and Nørresundby.

Today, cities all over the world experience the transformation processes of former industrial areas turned into something new. Yet these projects does not reflect the ambition of Industrial Bath.

This project searches for a symbiosis in the present, between the living breathing dusty dangerous fascinating industry and the public functions of the city.
Industrial Bath explores the authenticity of experiences that relate to current industrial processes transforming the landscape.
It deals with the industrial present (as opposed to the past), thus abandoning traces of nostalgia from the experience.

The specific architectural project is inherently rooted in the larger narrative of the context. Yet the building attempts to balance being part of a whole and being itself an autonomous framework for strong bath experiences.
In this respect the project mirrors the hill of Dybdalsbakken (the building site); fundamentally part of a context yet autonomous, a place disconnected from the outside world.

Hopefully Industrial Bath has managed to activate the full potential of its location.

METHODOLOGY

FIELD TRIP
Visits to the context of Aalborg Portland and the specific place of Dybdalsbakken are the cornerstones in the development of the project. By foot, bicycle or car - these trips to the context provide the raw material; sketches, impressions, photographs and material samples, for sensing the atmosphere and layout of the baths.

STUDY TRIP
In mid February 2008 a study trip to Istanbul is executed in order to study the architecture and bath culture of the Turkish Hammam baths. The trip provided inspiration for Industrial Bath and fresh eye perspective on bath culture in Europe.
The technical area of the swimming pool Haraldslund is also paid a visit.

DIARY
On the study trip a diary is kept, in order remember the impact of daily events.

SAMPLES
Material samples from the place of Industrial Bath are gathered in order to broaden the understanding of colour, structure and form. [See THE PLACE].

WORKSHOP
The ideas and form of the project is challenged through multiple two-day workshops Marts and April.

SKETCHING ON PAPER
Each step of the project is recorded in a number of sketch books. Within reach in the train, in bed or inside the Turkish Hammam, these books contain large scale conceptual ideas as well as small changes of form, useful clever ideas as well as fruitless ones. The sketches can be found in [SKETCH STUDIES], [CASES] and [ATMOSPHERE].

SKETCHING THROUGH MODELS
Models in cardboard, foam and concrete has been used to study form and conceptual ideas throughout the project. The ambition of the project has been to cast concrete models as part of the model experiments.

SKETCHING THROUGH NOTES
In the report the notes from the diary has been converted to small narratives that attempt to describe impressions of place. The texts capture the character of already existing places such as Dybdalsbakken [THE PLACE] or The Hammam [CASES], or places to be, such as Industrial Bath [ATMOSPHERE].

PHOTOGRAPHY
Impressions and atmospheres for the bath is captured through a camera lens.

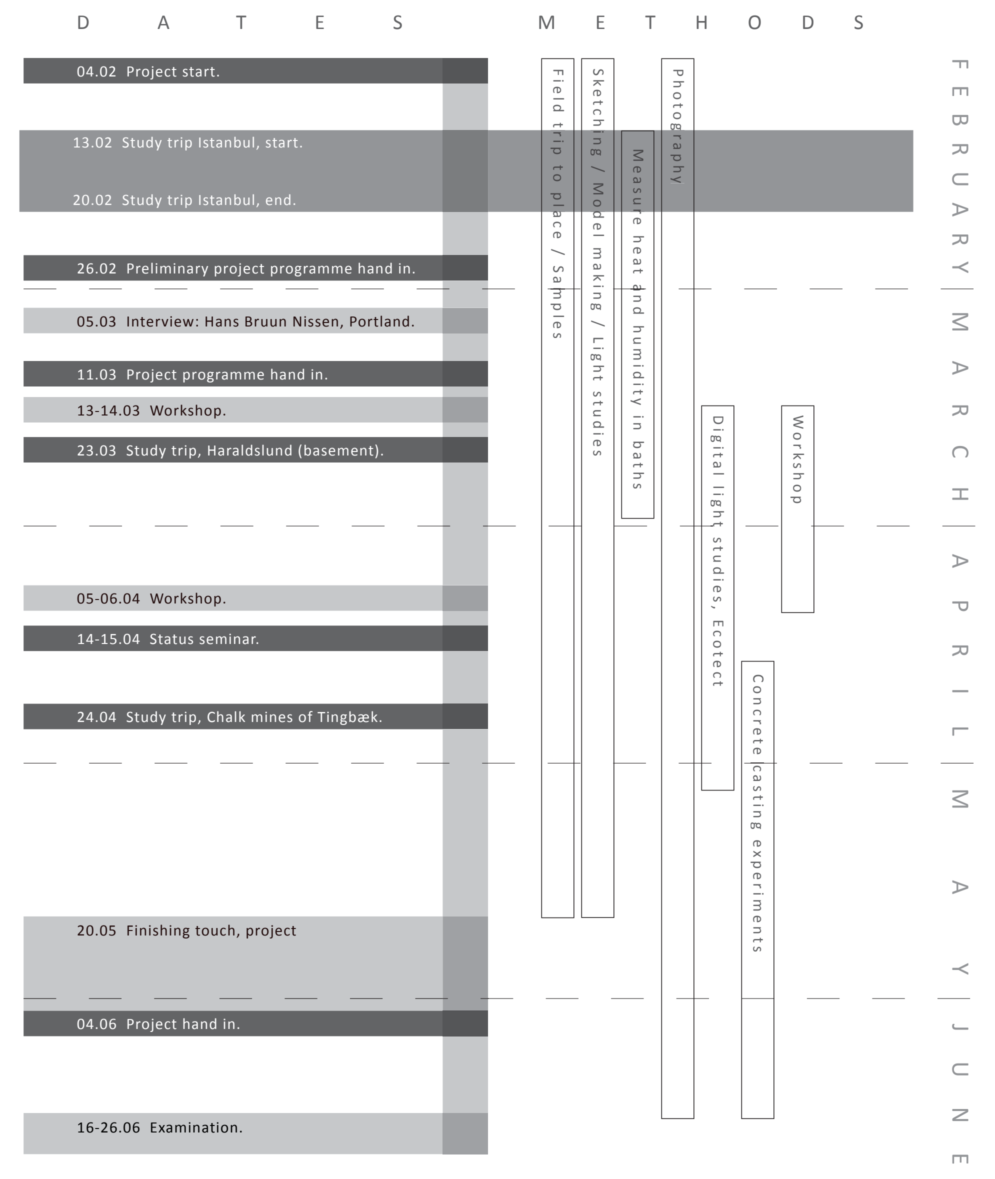
HEAT AND HUMIDITY
During visits to bath complexes quantitative data of heat and humidity have been recorded and studied [see CASES]. These quantitate data has helped to pin point the atmosphere and character of spaces in Industrial Bath.

QUANTITATIVE STUDIES: DAYLIGHT.
The reduction of daylight due to vegetation of various sort has been executed on site. The results has been implemented into the digital studies of light.

DIGITAL LIGHT SIMULATION
The spaces of Industrial Bath are investigated through the light simulation software 'Ecotect'. The simulations are compared to daylight on analogue sketch models.

CASTING IN CONCRETE
Institute of Civil Engineering has proposed to assist a series of experiments of concrete. For that purpose 1:20 models of the building or building parts is cast.

TIME PLAN



PROJECT BIBLIOGRAPHY

BOOKS

Beck, Christina; [Hong Kong 1997]; Byggeriets Istanbul.
Holm-Nielsen, Svend; [Århus 2000]; Et romersk-byzantinsk badeanlæg i Gadara (Tidsskriftet Bilbliana).
Calvino, Italo; [Denmark 2002]; De usynlige byer.
C. Beck, C. Forsting; [Köln 1997]; Istanbul: An architectural guide.
Claire Folkard; [London 2004]; Istanbul.
Eladio Dieste; [Sevilla 1998]; Eladio Dieste 1943-1996
Heiduk, John; [New York 1999]; Lines: no fire could burn.
K. Michael Hays; [New York 2003]; Sanctuaries : the last works of John Hejduk.
Manelius, Anne-Mette; [København 2007]; Flydende sten. Betons arkitektoniske potentialer.
Maxwell, Virginia; [Melbourne 2005]; Lonely Planet: Istanbul.
McCarter, Robert; [London 2005]; Louis I Kahn.
Pawson, John; [China 2000]; Minimum.
Weston, Richard; [Hellerup 2002]; Utzon: inspiration, vision, architecture.
Zumpthor, Peter; [Luzern 1997]; Three concepts.

WEB

http://www.aalborgwhite.com/default.aspx?m=3&i=3&pr=1 [Entered 04.02-06.06.2008]
http://annasromguide.dk/ordogbegreber/thermae.html [Entered 25.02.2008]
http://www.flickr.com/photos [Entered 05.03.2008 - 27.05.2008].

MAGAZINES

Aalborg Portand; White unlimited.
Aalborg Portland; Catalogue: The Rørdal lake park. 1987.
Arkitekten; 03|08 Issue. Concrete theme, p. 25-67.

LECTURES & PRESENTATIONS

Per Petri; [Aalborg 2008]; Om tankstationer ved verdens ende, kreative aftenselskaber på europæiske pladser, lufthavnsterminaler med fly der letter og lander, regn i Basel, ulasteligt hvide skjorter og en hel del andet.

SOURCES

|1| Aalborg Portland; Catalogue: The Rørdal lake park. 1987.
|2| Results based on own quantitative studies of daylight measured manually by lux-meter on site [22.05.2008].
|3| Results based on own quantitative studies of temperature and humidity measured automatic by combined meter inside Hammam complexes [13.02-19.02.2008].
|4| www.voyages.photos.fr (entered 03.03.2008)
|5| http://www.flickr.com/photos/koppenhoefer/88028398/sizes/o/ [Entered 27.05.2008].
|6| Svend Holm-Nielsen; Et romersk-byzantinsk badeanlæg i Gadara.
|7| Zumpthor, Peter; Three concepts.
|8| Pawson, John; Minimum.
|9| Weston, Richard; Utzon: inspiration, vision, architecture.