Trondheim is a growing water city and has great potential for urban development along its waterfront. The studio will explore how the city can be connected to the water, and how the urban waterfront can become a unique place, in which city and nature, existing and new, on- and offshore structures can unfold and interweave.

As specific design site we have chosen Brattøra, an island located North of the city center of Trondheim. The island is still mainly characterized by harbor activities, warehouses, terminals, and railway tracks. Yet due to urban revitalization and the decision to relocate the harbor and goods yard outside of the city, large areas for urban development become available on Brattøra.

The studio will develop concepts for a mixed-use urban waterfront that relates to its cultivated urban and natural context, by respecting the idiosyncrasies and many identities already present on the site. We will elaborate urban design and architecture proposals for the urban transformation of Brattøra as well as its connection to the water and surrounding areas. In the future, Brattøra has to be reconceived as a connective place, where the city meets the fjord. The goal is to design distinctive places for living and working along the water that become a modern counterpart to the city’s more traditional identity.

The studio and integrated project course will be conducted in the context of the ByLab Trondheim, a laboratory where our faculty in collaboration with the municipality can provide unconventional ideas for the future development of Trondheim. We ask for visionary projects to foster the debate about spaces on the water that allow for a variety of structures, atmospheres and sensual experiences.
Water cities and Trondheim
Like other water cities, Trondheim has great potential for urban transformation along its waterfront. The urban waterfront, being the area where the sea and the city are ultimately facing each other, is a unique place that deserves special exploration. Within the many challenges the contemporary water city is facing, urban waterfronts have developed their own answers. The sharp contrast between the densely populated man-made city and the wide open sea has made waterfront developments a major part of city extension and architecture in recent decades. As in the case of the Hafencity in Hamburg, Kop van Zuid in Rotterdam, or Bjørvika in Oslo, the urban waterfront is commonly serving as visible and symbolic landmark that represents the future of its city or entire region. At the same time, it has to deal with consequences of harbor usage, contamination and climate change and is in need for sustainable proposals, regarding novel forms of living and working on the water as well as ecology, energy and society in general.

Brattøra today – harbor, central station and urban transformation
Brattøra constitutes the prime waterfront and city extension area along the Trondheim Fjord. The island is mainly used by the port and central station of Trondheim. However with the initiation of a revitalization program for Brattøra in the late 1990s, the port around Pirterminalen and Brattørakaia has been converted. Today, this urban transformation comprises two arenas for leisure and culture (Pirbadet and Rockheim), two hotels, several office buildings, as well as a new planned ferry terminal and guest harbor. Among others due to this urban pressure, it has recently been decided to relocate the main port industries of Trondheim to Orkanger and the goods terminal behind the station to the South of the city. Hence, even much larger areas of around 40 hectare become available for urban development on Brattøra: the port on Pir I and II in the North-East as well as the rail track area towards the West. These areas are still characterized by harbor infrastructure, logistic centers, containers, warehouses, terminals, and transportation lines, which form huge barriers that separate the city center from the fjord as well as the urban area already developed on Brattøra.
Brattøra’s future – coexistence of urban life, harbor and recreational activities

The studio will explore how the barriers can be turned into connectors, and how the city can be extended to the fjord. We will develop strategies to transform the port and track area on Brattøra into a state of the art urban waterfront. From an urban perspective, the Trondheim Fjord serves as a backbone for the whole region and forms a large open and natural space, both for the places directly facing the water and the surrounding areas. As with all major places, many demands are made upon this shared space, and these demands may at first glance appear to conflict with one another. Considering that the port and goods yard will be relocated in stages and that some harbor functions, the boat terminals (Hurtigruta, ferries, cruises) and marinas will stay and even be upgraded, it is necessary to develop complementary concepts for the coexistence of urban and harbor functions.

Brattøra also contains Trondheim’s largest public transport junction. The majority of people who travel to Trondheim by train, bus and boat arrive there. Thus, the old railway and bus station in connection with the boat terminals should be developed into a modern public transportation hub for the city and its region. The goods yard forms the geographic heart of the urban waterfront and has the potential to become its new center.

Challenges of the existing building development on Brattøra are its large scale as well as lack of housing and everyday urban and recreational amenities, which make the area lifeless after working hours. To make Brattøra more multifaceted and lively, the new urban waterfront should give priority to such uses. While aspiring to be spatially, functionally and socially dense to cater to the sustainable growth of the city, the new urban waterfront should also relate to the human scale, as well as meditate between the existing large scale structures and the traditional fabric of the city. In order to generate urban life, the interaction between indoor and outdoor areas will be of importance, particularly on the public ground.
New urban waterfront at the interface between city and nature

Based on the unique history, geology and genius loci of Brattøra, the studio will develop concepts for a mixed-use urban waterfront and its relatedness to its cultivated urban and natural context. We will elaborate urban design, architecture and landscape proposals for the redevelopment of Brattøra as well as for its connections with the water and surrounding areas. Major themes of the studio will be urban transformation through a mixture of formal and informal modes of urbanism and architecture, old and new, on and offshore, large and small scale structures as well as low-budget/high-culture and high-budget/low culture uses. The existing qualities of our site and along the water can be enhanced in a number of ways: empty warehouses can be converted into cultural centers, former port structures be used as temporary spaces for urban pioneers, harbor piers can be developed into urban islands, rail tracks transformed into promenades and jogging lanes, landfills can be renaturalized into land art monuments, and the shore can be appropriated for recreational activities. In the future, Brattøra has to be reconceived as a connective element, where the city meets the fjord. The new urban waterfront will become the major gateway to the city from the sea. As such, Brattøra should not only be connected with the city center, but become an integrated part of the whole city.

The goal is to design a distinctive urban waterfront that becomes an avant-garde complement to the city’s more historical identity, by respecting the idiosyncrasies and many identities already present on the site: the water landscape as living place, the port structures as reminiscence, and the terminals and stations as transit space. These spaces as well as the constantly changing weather and unique light give opportunities for a variety of public spaces, buildings, atmosphere and sensual experiences on Brattøra.
Living laboratory for the knowledge city Trondheim
Trondheim is also a growing university and technology city. By fostering knowledge generation and innovation, the Municipality of Trondheim aims to further strengthen its core competencies. To attract qualified students and employees, the provision of excellent working environments for the formal and informal exchange of knowledge as well as attractive places for living and recreation are of central importance. Brattøra is one of Trondheim’s most significant urban development project and will have an impact to what extent the municipality will be able to cater to the needs of a knowledge-based society. Hence, Brattøra should also become a role model for the future development of Trondheim as a knowledge city and establish itself as living laboratory for creativity, experimentation, social and environmental responsibility.

Bylab / City Lab Trondheim
Our dean, Fredrik Shetelig has initiated the proposal of viewing Trondheim as a laboratory, where our Faculty of Architecture and Fine Arts in collaboration with the Municipality of Trondheim can provide unconventional ideas. To work within and contribute to this city lab (Bylab), the studio and the municipality will cooperate on some “meeting points” based on a cross-cultural dialogue, critical approach, knowledge sharing, and exhibition of results. The overall goal of our joined endeavor seeks to find proposals for the future development of Trondheim as a water and knowledge city. The studio asks for fresh perspectives and encourages visionary projects to foster the debate about novel spaces on the water for a knowledge-based society.

City lab discussion
What are the potentials of water cities and Trondheim in specific?
How can a city be extended and connected to the water?
How does a city share its water spaces?
What are the unique qualities of places on the water?
How can urban, recreation and harbor functions co-exists and even complement each other?
What is a state of the art mixed-use urban waterfront?
How can an urban waterfront relate to both its cultivated urban and natural context?
How can Brattøra be reconceived as a connective element, where the city meets the fjord?
How can Brattøra become a role model for future urban development in regard to a knowledge city like Trondheim?
METHOD & STRUCTURE

The studio and integrated project course are structured into six interrelated streams, on which we will work in parallel.

Stream 1: Mappings & Imaginations
We will appropriate and explore our site and its context with field studies, mappings, and imaginations. The focus lies on the investigation of the historical development, topography, cultivated urban and natural spaces, formal and informal developments, as well as transitions between them. The aim is to produce an inventory of the characteristics, atmospheres, spatial structures and activities on our site. Constant interpretations of our inventory will inform the design process.

Stream 2: Visioning, Projecting & Designing
The design process will begin with a visioning phase. Based on the genius loci and specific context, you will propose ideas for the development of our site, by reconciling existing and new structures. Your visions will then be further developed into design concepts, strategies, and proposals throughout the semester. First, we will work on an urban design scale of 1:1,000 and develop proposals for the transformation of Brattøra into a mixed-use urban waterfront. Secondly, we will select typical zooms and elaborate them on an architectural scale of 1:500 to 1:200 to show the main characteristics of the urban design projects. The proposals on both scales will be refined in iterative exploration, design, and modeling loops.

Stream 3: Model Building
In the different scales, we will build models as design tools to develop and test adequate spatial structures, compositions, and building typologies for our projects.

Stream 4: Lectures & Readings
A lecture series will provide a broad perspective on contemporary urbanism and architecture. It will include introductions to the studio and seminar topics, inputs from our local partners and experts, as well as presentations and readings on relevant urban design and architectural texts.

Stream 5: Explorations & Research
Our research efforts will concentrate on transformation strategies for former industrial sites, mixed-use urban waterfronts, and hybrid buildings typologies. We will critically explore exemplary urban design and architecture projects as references for our studio work. Thereby, the focus will be on waterfront developments, including case studies of European water cities such as Amsterdam (Eastern Docklands, Borneo Sporenburg), Basel (Rheinhäfen), Copenhagen (Island Brygge, Nordhaven), Dublin (Docklands), Hamburg (HafenCity), Helsinki (Fiskehamnen, Västre Hamnen), Malmö (BoO1), Nantes (Île de Nantes), Oslo (Bjørvika), Rotterdam (Kop van Zuid, Müllerpier, Waalhaven), Trondheim (Nedre Elvehavn, Nyhavna), and Stockholm (Hammarby Sjöstad).

Stream 6: Visualizing, Scripting & Documenting
Throughout the semester, you will produce adequate visualizations and write a script about your design and research project. This will help you to guide and document the progress of your work. All work will be published in a book and is planned to be featured in an exhibition.

LEARNING OBJECTIVES

The learning objectives are to gain advanced skills and experience in urban design and architecture, concept development, visionary and strategic thinking, and presentation techniques. These will enable students to tackle complex urban challenges and to synthesize their ideas and knowledge into a design project. The studio and seminar seek to provide a comprehensive package linking design, research, theory and practice.
FACTS

Courses & credits
Studio AAR4515 Urban Design and Architecture (15 ECTS)
http://www.ntnu.edu/studies/courses/AAR4605
Seminar AAR4905 City Lab – urban design theory, research and practice (7.5 ECTS)
http://www.ntnu.edu/studies/courses/AAR4905

Instructors
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Ass. NN, nn@stud.ntnu.no

Partners Trondheim Kommune & City Lab
Hilde Bøkstad, director of city planning (Byplansjef), architect
Per Arne Tefre, responsible person for Brattøra, planner and architect
Are Risto Øyasæter, coordinator Bylab Trondheim, architect
Other experts

Language
English et al.

Excursion
Hamburg and Oslo
Other water cities such as Amsterdam, Copenhagen, Stockholm and Venice optional.
Planned ~20.-28.09.2014

Hamburg HafenCity, master plan ASTOC / Kees Christiaanse
Elphilharmony by Herzog & de Meuron

Hamburg Chilehaus, Fritz Höger, 1924

Oslo Bjørvika
Oslo Barcode, Dark, a-lab, MVRDV
Studio Rotterdam Waalhaven: renaturalization - activation - new construction, student project
Connection of the city to the WATER

Transformation of BRATTØRA into an URBAN WATERFRONT

Brattøra as connective place, where CITY MEETS FJORD
Studio and seminar: readings & case studies <> site explorations & interpretations <> urban design and architectural projects
TIMO METTLER 19
Student from the countryside
I've just finished high school and have been accepted to the university of Basel to study Chemistry. I need to find a place near by with good public transport facilities as I don't own a car. I'm from the countryside

CLAUDIA GLANSMAN
expecting a baby
in Rohrbach about one hour south of Basel. We both studied in Zurich, relevant jobs, and those jobs are in the city. We're expecting a baby so we're not sure if moving to the city is the best option, but it would be great if the qualities of city and rural life could be combined as we enjoy the large green spaces out here.

MAXIME BRIEL 37
Family father of three
Novartis Worker

BERNARD SCMUTZ 59
BUILDING
Downsizing
areas and good kindergarten and school services, and just the feeling of having your own house is amazing. But I do miss the city a lot and would love to live there again, and I wouldn't like to live in a boring slab building where everything looks the same.

We've lived all our life in Basel and own a large house, but we now want to downsize to something smaller as the kids have all moved out and we don't need all this space anymore. Our kids live in Basel too and we want to be close by to see our grandkids grow up.

Retired widow
I've grown up, got married and raised my kids in the outskirts of Basel. Last year my husband past away and I don't need my big apartment anymore besides it's too far away from good public transport services. I would like to be closer to the city life, family, cafes and other activities.

Project Rheinpark, students Lison Esperou, Nuria Nadal, Hildegunn Slotnæs

Current development:
1. Ex/Esso
   It's the first area to develop in the whole urban project so it's known as the pilot parcel.
   2. Activating Klybeckquai in 2012:
      - Initiating / Support of intermediate uses
      - Activating attractiveness of the open space
      - Development of railways and cyclist route
      - Initiating / Support of intermediate uses
      - Activating / Support of intermediate uses
   - Transforming the area to develop it first.
   - Activating Klybeckquai in 2012:
      - Initiating / Support of intermediate uses
      - Activating / Support of intermediate uses
      - Activating / Support of intermediate uses
      - Initiating / Support of intermediate uses
      - Activating / Support of intermediate uses
      - Activating / Support of intermediate uses

2012-2016
The two main open spaces of the proposal will be activated during this time.
- The transformation of Basel is the reaction to the need to develop the main open space, which is the promenade being a very present element.
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2016-2020
To finish the Rhine park and continue with the development of the southern parcel as well as the Rhenus and Navis parcels.
- Once the southern and northern pedestrian routes are connected as soon as possible the site with the surroundings.
- Activating Klybeckquai in 2012:
   - Initiating / Support of intermediate uses
   - Activating / Support of intermediate uses
   - Activating / Support of intermediate uses
   - Activating / Support of intermediate uses
   - Activating / Support of intermediate uses

2020-2025
To finish the last parcel of the project and to develop the parcels left, because the release date is not fully fixed.
- Giving the project its final form.
- Activating Klybeckquai in 2012:
   - Initiating / Support of intermediate uses
   - Activating / Support of intermediate uses
   - Activating / Support of intermediate uses
   - Activating / Support of intermediate uses
   - Activating / Support of intermediate uses

2025-2037
As soon as Grisard, the office building, is completed building the last parcel of the project, which will be the last phase.
- Activating Klybeckquai in 2012:
   - Initiating / Support of intermediate uses
   - Activating / Support of intermediate uses
   - Activating / Support of intermediate uses
   - Activating / Support of intermediate uses
   - Activating / Support of intermediate uses

The last phase is to build the remaining parcels as soon as possible, as they will be kept as long as possible because they were still in use.
CONSEQUENCES

PROPOSAL

MAKE PEOPLE FEEL THAT THEY WANT TO BE CONNECTED

Studio Lima Alicorp 2013, project Connective Urban Tissue, students Domitille Jalard, Lucie Sieys, Patricia Nicklas
Connective Urban Tissue, model 1:1000
Connective Urban Tissue, plan 1:1000
Connective Urban Tissue, elevation and section 1:500
COURSES
AAR4515 Urban Design & Architecture 15 ECTS
AAR4905 Urban Lab 7.5 ECTS

INSTRUCTORS
Prof. Kerstin Höger
Ass. NN

PARTNERS TRONDHEIM KOMMUNE BYLAB
Hilde Bøkstad, director of city planning (Byplansjef)
Per Arne Tefre, responsible person for Brattøra
Are Risto Øyasæter, coordinator Bylab Trondheim

LANGUAGE
English

EXCURSION
Water cities Hamburg and/or Oslo
Planned ~20.-28.09.2014

FOR MORE INFORMATION
Please see description online and/or contact us.
We ask for visionary ideas to foster the debate about the future of the water city.
Your are welcome to join City Lab Trondheim Brattøra!