Studio 2

Designing Cycles at 64°

The water-sensitive Nordic city as a model and response to climate change

The projections of global urban growth imply an increase in fresh water demand and a requirement for secure food supply. With the current, more extreme weather patterns leading to more severe rainfalls in short periods as well as longer dry periods, it has become clear that water and the permeability of the earth play a central role in how we design our built environment today. Certain parts are understood to be solved by engineers who apply technical solutions that are often invisible: by being subsurface, fenced-off or by hitting our blind spots. As architects and urban designers, we rarely think about the urban water cycle as a whole and how our interventions are embedded in it and could become productive elements in the urban fabric. In the light of this, the studio will focus on a holistic approach to water and food production systems from the building to the urban scale and consider the potential for architectural prototypes to respond to both global and local issues.

Site of Investigation
At 64° latitude, we will investigate how Umeå can become a model of how Northern Cities respond to climate change. We will study Umeå’s urban water cycle and food systems to formulate multi-scalar, multifunctional design responses from decentralized solutions on the building scale to the urban landscape. In the fall, the current municipal plans for Norra Ön will form the backdrop for architectural proposals that address new housing models and explore the relationship between urban life and integrated water systems. In the spring, we will focus on retrofitting existing neighbourhoods within the city to increase urban food production.

Studio Agenda and Methodology
We will start by mapping the existing landscape and climate conditions, systems of water infrastructure, open spaces, densities, building typologies and planned urban expansions as well as urban water flows in relation to a growing and increasingly diverse population to formulate design interventions in support of a circular water model that will increase the resilience of Umeå to a new climate reality. International case studies of water sensitive design strategies and projects will provide a joint knowledge base and tool box to design generic prototypes. These will then be sampled and adapted to current and future water scenarios to predefined situations in Umeå and its specific climate conditions. Building on the acquired understanding of Umeå’s urban water landscape, the spring semester will add the topic of local food production. Starting from Bengt Warne’s Naturhus we anticipate new architectural models with the aim to change the role of inhabitants and buildings as consumers to become producers. At 64° latitude, greenhouse extensions and building envelopes offer interesting possibilities to extend growing seasons and to diversify crops, to reduce energy consumption while providing hybrid living spaces between inside and outside. The design studio will be informed by input lectures and consultancy by local and international experts in the field of urban water management.

Studio introduction: Monday 13/9 at 13.00, Zoom