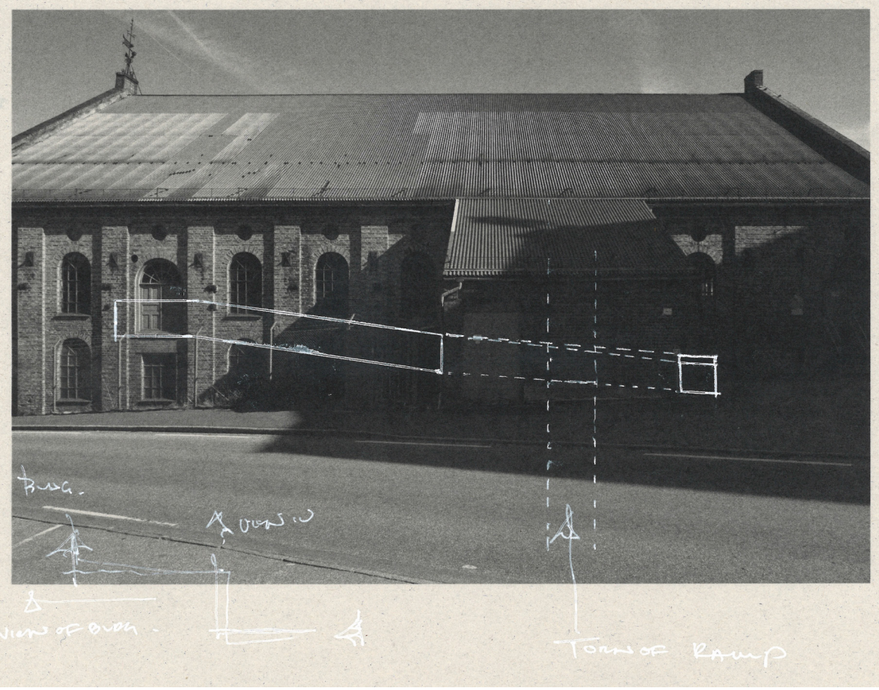
a space for processing

paper laboratory and research center
tistedalen, norway



Located in a former pulp mill, the Tistedalen Paper Laboratory forms a space in which material is processed - in this case, paper - from raw material to resultant product. Through investigations of material, time, and place, this diploma forms a study of the role in which continual processing and reprocessing has the capacity to form the foundation of an architectural investigation – one that coexists with physicality, fragmentation, and memory.

As a laboratory for experimentation, the project forms a space that can tie into the current paper mill downstream. Norske Skog Saugbrugs AS is located approximately two kilometers down the Tista River and is the owner of the site. As it is one of Norway's few remaining paper mills, the mill stays relevant in such a highly competitive industry due to its specialization – something that must be continually tuned throughout the years. Focusing primarily on supercalender (SC) magazine paper, the Norske Skog produces approximately 550,000 tonnes of paper per year in Halden, with most of it being shipped abroad for use in a variety of publications and media types. The proposed paper laboratory will allow for small scale testing and experimentation, assisting with new breakthroughs and methods in the production of paper.

The project frames itself as a search for the discovery of the fiber. From initial material studies to later investigations of site and program, the continual search to uncover the underlying essence has been at the forefront.

The architecture situates itself within the remnants of former site infrastructure. These come in the form of both unused or decommissioned machinery and water works, as well as a spatial vessel that stands more or less abandoned. Two areas of the site form the basis for the primary architectural investigations: the former water intake for the pulp mill and the existing building itself, a modified and adapted structure from 1888 that shows traces of every occupation and use over the past 130 years.

In both, the architecture has sought to both establish and reestablish the flow on site. This takes place through the movement of material throughout the site, as well as in creating the ways in which the human experience of the various remnants can take place. Dramatic moments such as the cut rock faces that once formed the water intake juxtapose the delicate and precise architectural insertions. Together, a new whole is created – one that will undoubtedly be processed and re-calibrated over the next 130 years.

The architecture exposes and celebrates these moments, allowing for a space in which a bodily experience of material can take place – a space in which we truly process – both in terms of material production but also through human perception.

storing

drying
curing
treating

making

rough sawing
debarking
pulping
forming

testing

strength
composition
quality
chemistry

analyzing

storing
studying
collecting

distributing

delivering
shipping

warehouse

storage spaces
lumber and recycling yard
240 m^2

pulp halls

machines and equipment
pulp pools and sheet formation
pressing and drying areas
2,400 m^2

laboratory

research labs
experimentation chambers
testing facilities
500 m^2

archive

library of paper
curation and collection
1,200 m^2

transporting

delivery, unpacking and sorting
200 m^2