

Reimagine a Factory

Strategies for Future Forms of Urban Production

1 Abstract



The site in 1923.



The site in 2021.

How, and in what ways, can industry be a positive force in the contemporary city?

Background

The city of Fredrikstad is proud of its industrial history. Along the river Glomma, the city was built on sawmills, brickyards and shipyards. Especially after World War I, where most of the goods needed were produced in or around the city. This made Fredrikstad one of the most important industrial cities in Norway in the early 1900s. Today, almost all industry is gone, and have been replaced with housing and commercial developments.

Norsk Teknisk Porselensfabrikk (NTP) was established at Trosvikstranda in 1916 to meet Norway's need for elements to build up the country's electricity network¹. Their portfolio include different variations of ceramic

insulators. Among many projects, their products are used in the power line between Oslo and Nore, which is now proposed listed due to its industrial value.

Besides producing technical porcelain, the factory was also Norway's first producer of thermosetting plastics. In fact, NTP is the only living evidence of the industrialization of Fredrikstad, and the factory is one of the few factories of its kind in the world, being the sole provider of technical porcelain in Northern Europe.

Due to an increased population, the Municipality of Fredrikstad created a densification strategy in form of a toolbox for "successful" city planning, and proposed areas suited for densification².

1 Poppe, 1991, side 5

2 Fredrikstad kommune, 2019, page 8

The site of NTP is suggested densified with 140% ¹. The Municipality is aiming to create an attractive and mixed city with housing, offices and culture. In light of the city's rich industrial history, why do not the Municipality want to keep production facilities in the urban fabric? Is it possible to combine city developments with production?

This project will investigate how historic buildings and closed programs be combined with new structures and public programs. In addition, what is the value of industrial architecture, and how can it facilitate spaces for new programs. How could you work with different zones of new/old, public/private and closed/transparent? What is porcelain and its architectural potential?

One could argue that urban production should be a vital part of future cities. Cities in general need to change the public perception of industry. Urban production will prevent the city from becoming monofunctional. Proximity to other creative environments can create innovation across industries, such as between artists and educational institutions. Production can also be an attraction that creates jobs, and generate income to the city, while the proximity to people will create a lesser need for transport. The relationship between the city and manufacturing is in constant flux as both living conditions and manufacturing processes continue to develop ².

The project is a critique of the ongoing densification strategies of Fredrikstad and other cities, where housing is the main focus. As an example, on the other side of the river Glomma, the Municipality of Fredrikstad plans to develop of a new borough at the site of the old wharf Fredrikstad Mekaniske Verksted (FMV). A 20.000 m² shopping centre is currently under construction, and 3000 housing units are planned. At Trosvikstranda, no concrete plans are ongoing. With my project on the chosen plot, I can show local planners and politicians how you could plan for urban production in the future, in addition to housing and leisure program. This project is based on the production itself, and do not focus on the possible housing and recreation program of the rest of Trosvikstranda.

Through careful analyzes, value assessment and

interventions, this project proposes a preservation strategy to keep the factory program in cities, and present how valuable urban production can be in combination with a synergetic program.

Reading *Tabula Plena - Forms of Urban Preservation* by Bryony Roberts, I identified several strategies on how to modify contemporary urban sites. In this diploma project, a new preservation strategy is explored, named *the Artery*. Creating a new toolbox, that can connect the public with the confined production facilities. The goal is to keep industry in cities and how that program can work as an incubator for future urban production and create an attractive meeting place.

By both physically and visually connecting different rooms, levels and buildings, *the Artery* will allow a gradual development of the site, take into account the operation of the factory. The strategy will work in different scales — from new exterior volumes, facade renovation to basic maintenance work.

On-site produced elements are used as long as it is possible to create a coherence between additions and existing buildings. It will be both site specific, and generic.

Site

The site is located in the outskirts of the western city centre, where it is placed between the river Glomma, the old housing district of Plankebyen and the new development area of FMV.

To me, NTP have always felt abandoned, and as I have lived in Fredrikstad for 18 years, I have always had the impression of this site a barrier along the lively river promenade. Through site research, I got to know a lively factory, where machines, people and art melted together.

The site is a complex system of buildings. Over the years, several building have been added, demolished, burned down or replaced — everything to be able to continue the workflow in and around the factory. The original factory building from 1916 is intact and still in use. The Directorate for Cultural Heritage has recently expressed interest in preserving the facade of this building.

1 Fredrikstad kommune, 2019, page 14

2 Warden, 2017

As the production has been modernized, the activity only takes place in 40% of the building stock. The riverside seems abandoned today, but played an important role in the factory's peak years, where ships with clay came from England. The riverside's connection to the building mass is not existing today, as the facade is completely closed, the windows are covered and the cement facades is badly maintained.

How and what can potentially house these abandoned buildings? NTP rents out some of the areas to other tenants. An electronic supply store, a flea market storage and an art collective, where some of the artists use excess porcelain from the factory. The most important objective in general is the activation of the area, the building and the inhabitants of Fredrikstad.

Strategies

As a contrast to a typical masterplan strategy, *the Artery* will work gradually to transform different buildings and test out different concepts to allow changes along the way. It is important to ensure a continuation of the

production in the future, and the project scheme will allow this to happen.

A future development of the site will exploit the existing building mass, to release its potential. The site offers opportunities to convey the history, productions and its peculiar architecture and potentially act as a model for reuse of industrial sites in cities. Exploring the site, I tested how the different spaces could be changed with only small adjustments to create more openness and accessibility.

My interventions with the site, has to be implemented gradually, due to the operation of the factory. Therefore, I will present different strategies, depending on the needs of the respective buildings, to develop the site year by year, and a gradually implementation of *the Artery*. The buildings that is framed are chosen either due to their condition, use or connection to the riverside.

As a first step I propose to shift the attention at the site towards the river and the industrial activity by opening the structure towards the river.



Map of site and the different buildings.

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|------------------------|----------------------|----------------------|--------------------|
| ① The original factory | ⑤ Composite building | ⑨ Treatment dept. | ⑬ Administration |
| ② Keram | ⑥ The shed | ⑩ Ovens | ⑭ Storage |
| ③ Niro building | ⑦ The storage shed | ⑪ The workshop | ⑮ Glass insulators |
| ④ Raw Material storage | ⑧ Kitteriet | ⑫ Plastics (removed) | |

To open the new part of the city as early as possible, the first phase should establish a new connection between the factory site, Trosvikstranda and the city centre.

Eventually, *the Artery* would extend into the abandoned buildings. By cleaning, removing window covers and unlock doors, these buildings will immediately gain more daylight and become more attractive. The chosen buildings offers different qualities. Connected directly to the riverside, the Raw Material storage has a potential to be one of the most public spaces. Programmatically, the building should host an attractor, to invite the public in to the site. This could be in the form of an art gallery or a showroom, in combination with a café or bar. This would answer to the need of a space to showcase the artist's work in suitable areas. Especially, after Hydrogenfabrikken art cluster closed down in 2015.

The shed, will with minor interventions, be revealed as a flexible shape. This will host an architectural porcelain workshop facility. In addition, a removal of a rotten floor in the *Composite* building will gain a double-height space. Reviewing old drawings of the site, I found a plan for a *velferdshus*. Translating to English, this is a building on industrial sites where the social aspects of the factory were taken care of. I propose a regeneration of the *velferdshus* to the composite building. In addition to social spaces like auditoriums and co-working spaces, the building will host a porcelain upcycling plant.

As the original factory building is only partially used, there is a potential to inhabit the unused areas for public

workshop purposes. This strategy aims not to disturb the factory from a future growth. The unused second floor will be used as a maker space, taking advantage of the flexible grid structure. Potentially, artists, craft schools, students and other craftsmen can rent a space and work with their projects. In addition, it will answer to the need of more artist studios in the city. A possible further extension of *the Artery*, will be a new main communication core and a public path overlooking the private production.

Conclusion

I started this semester with a critique of how cities are densified today - with Fredrikstad and the Municipality's densification strategy as an example. With a curiosity for urban production and reuse of industrial sites, I wanted to discuss how production can play a role in future city, to challenge how to plan the modern city.

The diploma project propose a preservation strategy, *the Artery*. Working strongly with transparency, on site-produced products, circulation and a gradual development of the site, I wanted to create a toolbox to preserve the site as an operational industrial place.

By removing, re-insulating and adding porcelain as an architectural element, the project resulted both as a concept that can hopefully be used on other urban industrial sites, and also create site-specific architecture.

Sources

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