Location: Pispala is a city district, in Pirkanmaa, southern Finland, 2.5 km from the centre of Tampere. It is located on the northern slope of Pispalanharju, the highest esker in Finland.

Administrative and planning: Pispala has been a farming land until 1869, it grew without a unified local development plan, as Tampere was industrialised. Factory and construction workers housing formed here a peri-urban area or urban village, resulting in unique area and building designs. Pispala was joined to the City of Tampere 1937 and official town plan was adopted in 1945.

Natural and cultural significance: For unique landscape and design features of the area, Pispala, together with Pyynikki, is widely considered the most beautiful district of Tampere and thus is popular as a tourist destination.

In culture Pispala is often associated with such names as: Lauri Viita, Olavi Virta, Mikko Alatalo, Hannu Salama, Seidi Salo, Keith Armstrong, Anu Inkkola, Kalle Leinonen, Marit Sjö, Ali Kaurantöki, Hassan Blasim, Aaro Hellaakoski, Juice Leskinen, M artti Syrjä, Aki Kaurismäki, Hassan Blasim, Heikki Salo, Tarmo Salmela, Pauli Hanhiniemi, Yrjö Jylhä, Risto Eronen, Seppo Kulmala, Lassi Valtonen and Esko Kovero.

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**Cultural life and local sights:**
1. The Pispala Centre of Contemporary Arts at Hirvitalo organises various events both outdoors in various venues around the suburb and within the gallery. (Hirvikatu 10, 33240 Tampere)
2. Community library, Pispala Library House, founded in 2001 by local citizens when the Tampere City Library closed its branch library in Pispala, contains an anarchist bookshelf, computers and small gallery space. (Vanhavuorenpaatsa 14, 33240 Tampere)
3. Kurpitsatalo, a community gardening project, that celebrates the cycle of the year with traditional pagan festivals, music and also has various allotments.
4. Primary school 1 to 6 classes. The school is located on the highest point of the ridge area.
5. Lauri Viita Museum, museum dedicated to celebrated working class writer, who came originally from Pispala. (Pispalanharju 47, 33250 Tampere)
6. Monument to the Finnish poet Lauri Viita, located near the highest point of the ridge. (Portaanpää 8, 33250 Tampere)
7. Pispalan haulitorni, a tower in which shot was made from molten lead poured through sieves at the top and falling into water at the bottom. (Haulikatu 8, 33250 Tampere)
8. Rajaporin sauna, oldest public sauna in Finland operated since 1906.
9. On the northern slope of Pispala the number of abandoned factory buildings, which now operate in graffiti galleries.
aa New roof and wall structure sectional details scale 1:10
1. 0.5mm galvanized sheet-steel roofing
2. waterproof membrane
3. 50mm lightweight concrete slab, high-pressure steam cured
4. 75/45/15/2.3 mm cold formed steel section
5. 75/75/7mm steel angle
6. 150/100/6/9mm steel I beam
7. 150/150/7/10mm steel I beam
8. 0.5mm galvanized sheet steel bent to shape
9. galvanized sheet steel covering
10. 12.5mm plasterboard
11. larch boarding, bearers, drainage layer protective layer, plastic sealing layer, polystyrene insulation, reinforced concrete roof slab
12. glass block 190x190
13. bedding reinforcement
14. bedding compound, mortar based
15. existing brick wall 380mm
16. 50mm lightweight concrete slab, high-pressure steam cured
17. standing seam joint
18. waterproof membrane, bitumen based
19. cold formed steel section
20. metal clips fixed at centers

bb Seating and skylight sectional details scale 1:10
1. 8mm safety glass
2. 25mm stainless steel drainpipe
3. structure for glass roof: 150/25 steel plates
4. 1.5 mm sheet stainless steel
5. cheesecloth on plaster, painted white
6. glass roof: 12mm clear glass, 8mm safetyglass, 10mm wired glass

Glass block wall assembly scheme

Fragment of glass wall, supported by T-sections scale 1:10

Diploma thesis description:
"Pispalan kattohuopatehdas. Industrial complex transformation."
Pispala area history
The site for diploma project is located in Pispala, a city district of Pirkanmaa, southern Finland, 2.5 km from the centre of Tampere, on the northern slope of Pispalanharju, the highest esker in Finland. Pispala region has been a farming land until 1869, it grew without a unified local development plan, as Tampere was industrialised. Factory and construction workers housing formed here a peri-urban area or urban village, resulting in unique area and building designs. Pispala was joined to the City of Tampere 1937 and official town plan was adopted in 1945. For unique landscape and design features of the area, Pispala is widely considered the most beautiful district of Tampere and thus is popular as a tourist destination.

Site description
Diploma work focuses on rehabilitation of industrial entity Vanha Tulitikkutehdas, located in Tikkutehtaankatu 4, Pirkanmaa. The complex consists of two groups of buildings, originally designed for roofing felt and masonry factory purposes. The site is accessible from Paasikiventie road (the North East, direction to Porrassalmi lake), being separated from the rest of Pispala settlement by steep slope. It is well known as graffiti factory because of multiple paintings, mostly interior but also presenting on facades. Current condition of the buildings is poor, the site is built up with multiple storage and garages, surrounding vegetation is excessive.
**Roofing felt factory**

The plant operation and beginning of construction phases starts in the late 1800s, after Pori railway completion and cardboard and paper production starts at Santalahhti. Although the current roofing felt factory building represents 1940s factory design, the history of its revisions is intensive and multi-stage process. It is in the late 1800s when the red brick building wall structures were built. Later in 1940s under the supervision of Heikki Titola foundations were replaced and new concrete pillars in minimalist style installed. Factory building is considered as a part of Santalahhti Industrial landscape, rather than having a significant architectural or historic importance. Solid mass of the factory is terraced into the slope of of Pispalanharju, facing the gulf of Santalahhti. Due to its dominant position on the site, building contributes to the original landscape of the area. Recultivation planning will require to consider removal of the layer of contaminated soil.

**The match factory**

Factory and warehouse buildings constructed in 1926 by the architect Aarne Sarvela are culturally and historically significant buildings, associated with the 1920s and 30s the cooperative movement. The building has two floors with the large freight elevator at the eastern end. In the single-storey section branch offices were placed. The factory building's load-bearing structures are reinforced concrete pillars and beams with the load-bearing brick masonry on the perimeter. The two-storey stone-built warehouse building, gunpowder storage, is built at the factory's Southern side. In total there are 8 separate building related to the Match Factory including the shop, air-raid shelter, watchdog hut, transformer building, gatekeepers house and storage building. Structurally, the shop building (on foto behind the main volume), is in the best condition, as it is still operated, the condition of the rest of the buildings, wooden in particular, is poor.

**Paper mill**

The oldest part of the plant is likely to be built in 1800s when the building received its horseshoe shape. Santalahhti paper mill has had a multiple changes and expansion history. The red-brick factory was expanded both in the directions to the South-East, and to North-East. Papermill belongs to industrial heritage of Tampere as a one of Enquist factory buildings, significantly contributed to industrial activities of that time. Its courtyard and chimneys form a distinct cityscape typical for early organic building tradition of the area. While the facades and interiors have been changed due to multiple renovations, the building is preserved in its original steel and concrete structural solution of the late 1800s and early 1900s. In a whole it is in a good condition and operated.
Aims of the design

Current work efforts to rehabilitate the marginal environment, where the local youth of Pispala area already generated the grounds for establishing community. Their shelter, nevertheless, has to be robust enough to keep up with the pressure form the outside world, and possibly speak for itself through it’s design, to remain the unique spot in a world that is inclined towards standartisation.

This work also explores romantic side of decaying industrial architecture and possibilities for new designs to engage with true charisma of it. Complex surfaces and reach graffity colors of Pispalan kattohuopatehdas deliver the strong statement and very particular identity, thus aproach to design was to find out what is missing for the building to remain a home for next generations of young areas’ artists. This brought several problems to solve within social aspects of design, it’s practical use and overall character of it:

-Social recognition of Graffiti Factory as a valuable cultural entity, is essential for its preservation.

-In terms of its practical use, the lack of a strong link to the needs of locals, put the factory under the risk of demolishing, as local business intends to take advantage of buildings' exceptional location with the view on Näsijärvi. Several proposals were made recently to build up the site with a new housing block.

-Reasonable intervention in graffiti factory design, highlighting buildings' silhouette against the slope of Pispalanharju esker, would possibly help to reinforce the status of graffity comunity in future.

The problem, nevertheless, is that for marginal graffity factory, improvements listed are exactly the oposites to it’s normal conditions. Avoided by general public, in constant risk of demolishion and hidden within abandoned site, these buildings provide satisfactory settings for accomodation the activities of youth, that often has no resources and authority to establish environment, but striving to have something they can call their own.

This seemed to be an important element of Graffiti Factory spirit, and although new design disturbs equilibrium of conditions essential for the building to stay alive, the goal was to keep the spirit intact and possibly complement to it.

Decay and abandonment of factory premises brought different possibilities for them to be used. The absence of window framing, doors and partially roofing suggests, the buildings are freely accessed both by winds and public: efficient ventilation, extra daylight are in fact necessary for the space where paints are spayed. Plenty of walls, fresh canvases, generally in good condition, promises potential for further development and expansion of "graffiti gallery" in future. These factors,spaces free of pre-determined function, and absence of restricting authority, are elements that have created a necessary settings for graffity comunity to flourish.

Thus, to reveal resources for wider public recogniion and support the artists community of the Graffiti Factory, design solution, attempts to maintain the rough character of the area, reinforcing its fabric toward better accessibility and maintenance, highlighting potentialities of the environment to establish a clear image of itself.

Photos below represent respectively the current state of interior spaces on levels +4.000 and -4.000. In general, the structural and aesthetical conditions of the factory building floors changes from very poor to relatively good as the distance from entrance level increases, reaching the best on a the top floor +4.000, which appears to be the most suitable for possible rehabilitation. The difference of integrity in bearing structures and interiors of the floors thus became a starting point in development of the design proposal, allowing to distribute different functions accordingly.
Design proposal: objectives

Following guidelines were developed for the design solution:

- connection of the settlement on the slope of Pispalanharju with the rest of Santalahti by wheelchair accessible elevated pathway;
- design of an observation deck on the roof top level of factory building;
- proposal for artists’ studio on the top floor of the factory building;
- arrangement of sheltered space above the pedestrian pathway observation platform and artists’ studios;
- recultivation planning for existing vegetation;
- design of necessary infrastructure and accesses to the factory area.

Proposal details

New addition to the factory complex consists of two volumes, in front of the body of the main building, long clad with brick box, covered with continuously supported sheet metal roof, square tower rises in contrast, supported by steel skeleton, faced with sheet metal. The newly designed walls, facing the lake Näsijärvi and direction of Tampere are opened with frame-like windows, while the back facade rising against the railroad is almost blind.

In the core of design solution is scenario of discovery of original local landscape and views. The pedestrian access from the settlement on the slope of Pispalanharju (1) is provided by 28 meters span bridge resting on the bearing wall of a factory building, additionally reinforced by steel framework. Walk over the railroad serves to prepare visitor to discover the views Pispala framed by the roof structure. The bridge is followed by a ramp, allowing the access to the observation deck (2) on the level +7.000 and artists’ studios (3) on the level +4.000.
By the elevator or staircase of adjacent tower (4) the visitors lead through the site towards the shoreline of Näsijärvi, while the benches on sides offer spaces for relaxation in a previously unsuitable setting. The benches help to correct the differences in levels, protect the trees and determine the location of the plant beds. As well as the rest of the site design elements, they are made of concrete.

Observation deck is clad with 35/120 larch boarding, the artists’ studio skylights on the open eastern side of it form a resting places, while sheltered western side is dedicated to the open stage.

Graffiti studio accessible directly from the stage for the purposes of artists, the access for general public is provided both with the ramp from the +7.000 deck level and by elevator on the level -4.000. The layout of studio suggests utilisation of maximum possible wall surfaces, for this purpose rotating partition, both serving as movable screens allowing arrangement private work environment and canvases are designed. The furniture layout follows the same logic of free of predetermined function space. Elevator located in the entrance hall of the ground level links the site and parking areas with the studio and platform, direct access inside the building is also available from back Northern facade, both entrances are for service staff and artists. For the needs of visitors and staff of graffiti factory 30 parking places provided in proximity with the main entrance and behind the building, design solution hereby mostly relies pedestrian and bicycle access from neighboring areas.

Construction principles and materials.

The uninsulated roof structure covering the observation deck consists of a system of steel frames turned at an angle to each other, enclosed by a sheet steel piling. It follows the outline of external factory walls, thus distributing the loads, relying on existing brickwork. However, additional examination of structural stability of the solution proposed and bearing capacity of existing walls is required. The steel skeleton frame is formed of 150/150/7/10 mm beams and 75/45/15/2.3 mm cold formed steel sections, supporting 50 mm lightweight concrete slabs. Waterproof membrane and 0.5 mm galvanized sheet-steel roofing cover the outer surface of framework, while 20 mm weatherproof plywood panels are attached from the inside.

Continuous sheets of the roof surface, laid with standing seams in vertical joints running continuously through surfaces, give characteristic stripped appearance to the facade, complementing existing brickwork. The sheet metal is fixed on the horizontal joints with flanged seams, vertical joints align with the edges of windows, softening the line were new and old meet. Window openings enclosed in a metal strip around the reveal. The joints around the large openings of the main roof and a tower in some cases left "of grid". Skylights, visually link the interior space of artists’ studio with the outside space allowing the visitors of the Graffiti Factory become a witnesses of creative process. They represent a combination of flat panel skylight and a seating place with the steel frame of skylight providing support.

Factory building

External walls of factory building are 350 mm thick resting on concrete foundation on top of sand-gravel cushion, concrete columns distributed with the spacing from 3.800 to 4.600 mm, floor heights varies from 2.300 up to 3.700 mm. Flat roof covered with the bitumen over the insulation layer. Integrity of load-bearing structures and roof is sufficient, thus it is assumed the existing structure is capable to carry additional loads from the design proposed. Meanwhile, strengthening the existing reinforced concrete structure by bracing the columns with another metal framework may not only improve their load-bearing capacity, but also complement to visual appearance.
The former factory workers’ cafe and storage building (2), located on the axis of pedestrian pathway is renovated and turned into summer cafe utilizing the terraces in front of it for the outside dining.

Recultivation planning

After the removal of the layer of contaminated soil, for a pavement at the parking level -5.000 and the entrance level platform concrete slabs 1.5x3 m and 1x3 m used to match the character of industrial environment, the same pavement applied to the pathway interrupted by wooden boarding around the the seating places, surrounding area additionally to existing trees is planted with local bush species to create a sense of harsh yet articulated green belt.

Summary

The aims of architectural intervention are both to achieve environmental improvement for Pispala area and develeop an example of successful intervention in derelict factory building. Analysis of the site was made to define possible problems to work with. It was found that the existing traffic scheme cuts away the settlements of Tahmela and Virala and area of Pispalanharju from the rest of Santalahdi and the shoreline of Näsijärvi. The task for the factory and its site was finding respectable way to approach their existing state, articulate their value for local community. Thus, for new design it was decided to reinterpret the aesthetics of a derelict building and most importantly expand its practical use, so idea of the pedestrian-friendly environment would become a core of the solution.

Design suggests environment for 10 graffiti artist working simultaneously in the studio, provides a place for socialization and self-expression around symbolic stage at the sheltered side of the upper deck and a place to get away at the observation side of it. In design the art community and general public meet and interact freely under the same roof by of sharing one path. This work efforts to interact with something truly original in architecture - derelict industrial building, to speak its language. Design offers a way to approch derelict architecture that is valuable in its broken state, has important impact on social environment.

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