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O4. CASE STUDY:

REGENERATION OF PADASJOKI SAWMILL AREA, FINLAND

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CONTENT

INTRODUCTION

The case study was prepared in frames of the EU funded project "Circular Economy in Wooden Construction" (Wood in Circle), which aims at delivering innovative student-centered transdisciplinary education in circular economy-based wooden construction to postgraduate students across the European countries (https://woodincircle.eu/).

Objectives of the project:

- ✓ To integrate innovative student-centered phenomenon based, research based, blended learning and social leadership approaches into Master's degree study programmes.
- ✓ To develop a new course, educate and involve postgraduate students and teachers in scientific research on the whole life cycle of wooden construction.
- ✓ To ensure strategic transdisciplinary transnational cooperation among higher education institutions and business enterprises in development of new learning methodology and the course.
- ✓ To increase academic and public awareness and promote sustainability and circular economy in construction sector.

The aim of this case study report is to provide an overview on how Padasjoki Mill area could be renewed both from the perspectives of urban and social regeneration. In this report, these terms may be used interchangeably.

According to Ginsburg (1999) urban regeneration is a policy, which has been dominated by property development and economic forces and is therefore ignored as an element of social policy. Social regeneration is understood as appropriate delivery of welfare services in poor neighbourhoods and the improvement of local communities in regeneration processes. According to Roberts & Sykes (2000) Urban regeneration involves the process of remaking places. In this process, regeneration initiatives are planned to improve the physical conditions of places, increase economic growth and environmental sustainability, in order to facilitate better social life for people.

Ginsburg (1999) names four theme areas which should be analysed, if we want to put more "social" in urban regeneration policy. First, the area should be examined through improved delivery of and access to social housing, health care, education, social care, benefits and employment training services. Secondly, we should pay attention to how participation and empowerment of local communities in urban regeneration activities. Thirdly, it is important to make an investment in and facilitation of civil society, social capital, community capacities I.e. building of social trust and support of local associational activity. The fourth view is giving voice to and addressing the needs of those who are frequently unheard in processes of consultation and participation. These kinds of groups can include for example single parents, disabled people and ethnic groups.

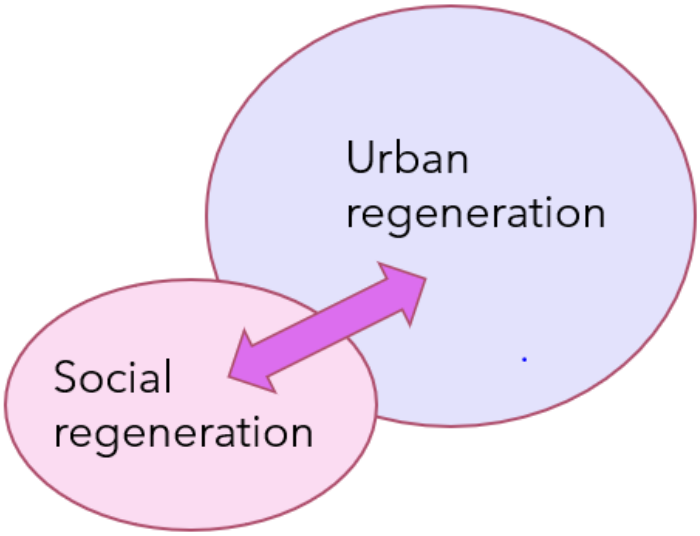


Figure 1. Relationship between urban and social regeneration

It appears, as social regeneration is and emerging concept to urban regeneration. They should function in interaction with one another, hence physical environment is renewed for the sake of users, for people to create social interaction in the built environment. Social regeneration cannot function alone, as it is dependent on physical premises. In this study, we look at in practice how these are seen by users at Padasjoki Mill area.

1. DESCRIPTION OF THE AREA

1.1. Location

Padasjoki is a small municipality of 2800 citizens at Päijät-Häme province (https://www.padasjoki.fi/fi).

The maps are shown in Figures 2 and 3. The Old Sawmill Area to be analyzed in this case is shown in Figure 3.

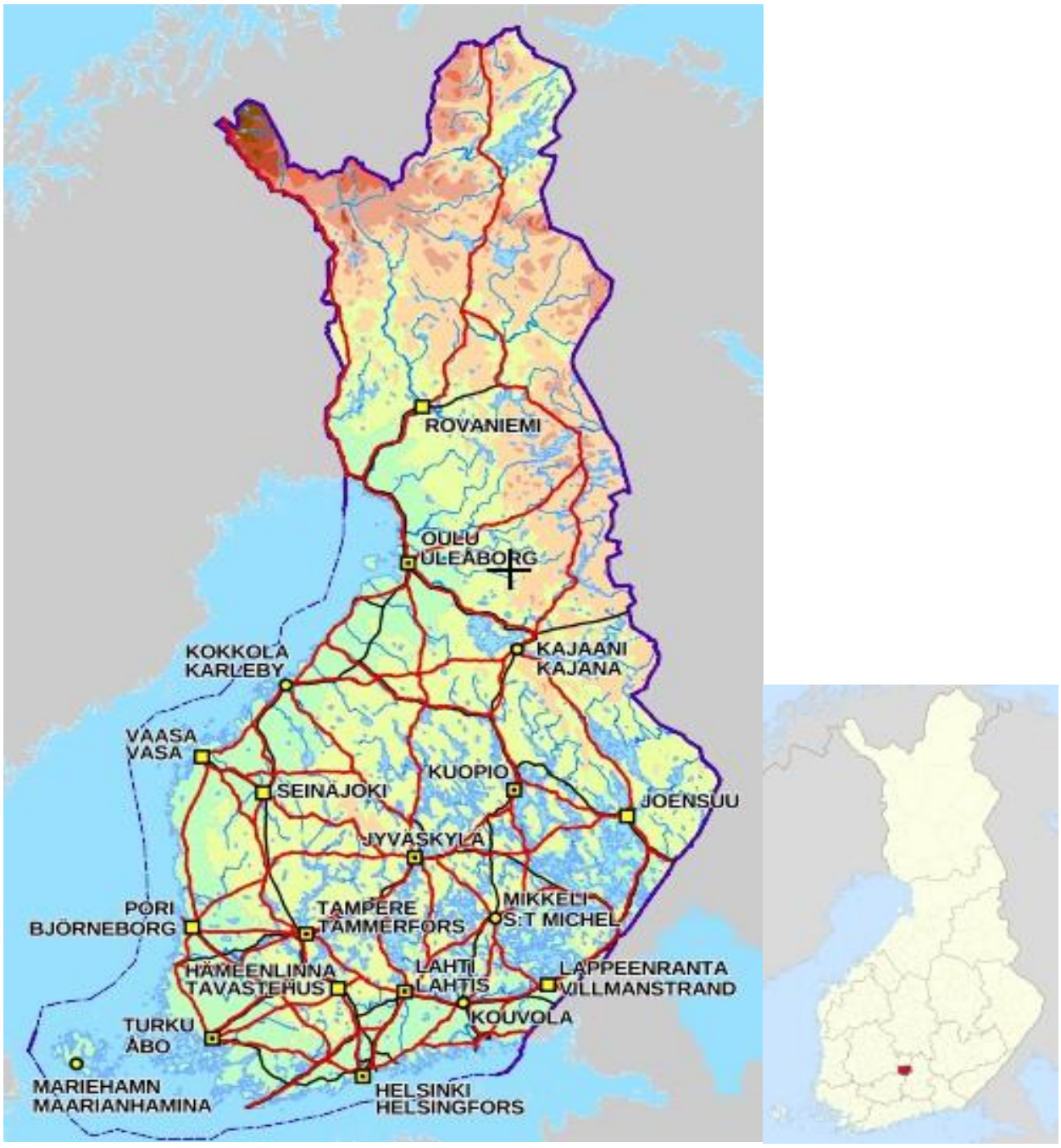


Figure 2. Padasjoki map (1)

Figure 3. Padasjoki map (2)

Figure 4. The Old Sawmill Area

Current Zoning / Land use is depicted in Figure 5. Future development of the area, objectives are showen in Figure 6.

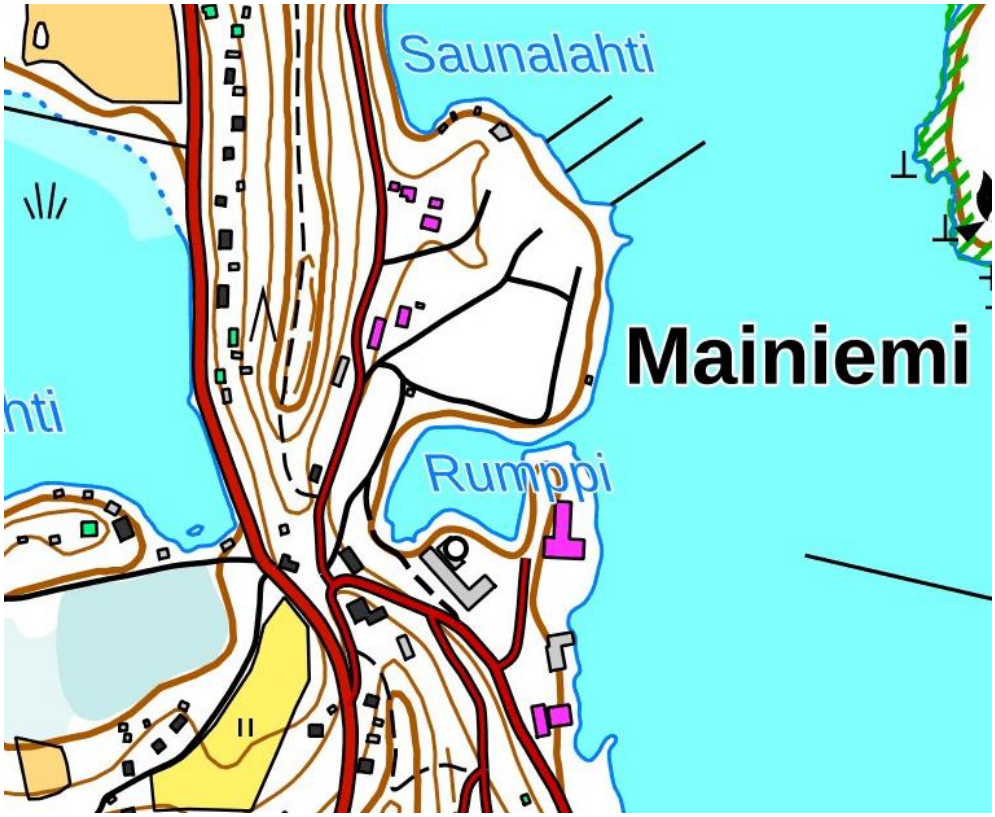


Figure 5. Current Zoning / Land use

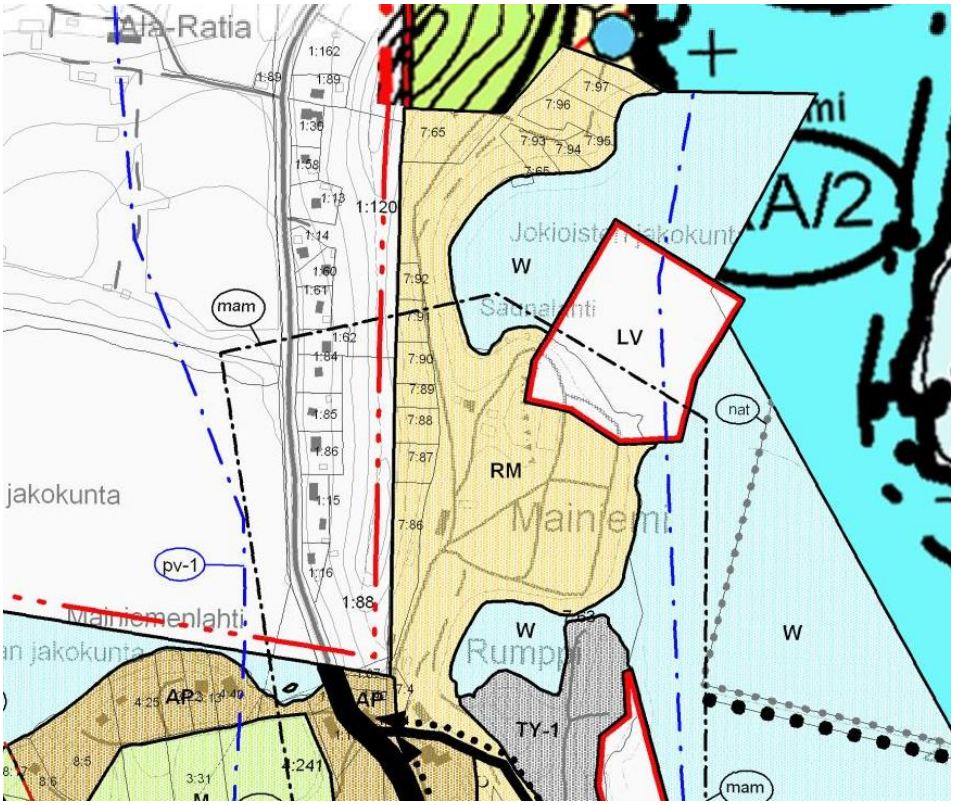


Figure 6. Future development of the area, objectives

1.2. History

Mainiemi double-ring steam sawmill was founded in 1880 by the manor owners of the region .The land for the sawmill was purchased from Brusila and with the sale, the buildings and furniture in the area were moved to a new farm called “Sawmill”. Rumppi bay was a natural water pool for logs which were transported to the mill area using tugboats.

The founding members of the sawmill operated the sawmill until 1909. The owner of the farm, A. V. Nieminen, bought the sawmill in 1909. In 1910 he had to rebuild a sawmill completely destroyed by fire. U. Nieminen inherited the sawmill in 1919. Due to the minority of the heir, the sawmill was placed in the care of a guardian.

Even later, U. Nieminen was not particularly interested in the sawmill's affairs and was gradually turned into such a bad position that it was forcibly turned into a public limited company around 1929, Mainiemi Sawmill Limited Liability Company. Although the sawmill's difficulties accumulated during U. Nieminen's ownership period, there was reform at the time. During his time, the sawmill's new office building was completed, workers' dwellings and a new power plant (1923). Severe years(Pula-aika) of shortage plagued the newly established sawmill so bad that the sawmill was closed for two years.

The sawmill resumed operations in 1932. With the recovery, the sawmill underwent renovations and received one more ring(kehä). There was also a planing plant in operation. When a drying room was built on the premises of the old workshop, the boards no longer needed to be “tapped” to the boardyard to dry. The sawmill caught fire in 1936 a fire which, fortunately, was confined to the boardyard. The buildings were not destroyed.

The blow to the entire Padasjoki Municipality was the bankruptcy of the sawmill in 1963. The sawmill would have required modernization of the machinery and greater interest from shareholders to continue operations.

In the bankruptcy auction, the sawmill area and its properties were transferred to M. Mertasalmi. Afterwards, some of the buildings have housed plastics, wood and metal companies and boat maintenance operations. After the areas became the property of the Padasjoki municipality.

1.3. Buildings and their current state

Mainiemi Sawmill area is one of the few such environments in Finland which still consists steam engine equipment and large number of buildings from the era (see Figure 7). The most important cultural historic buildings are protected by urban area plan eg. Konttoripytinki, Valkoinen pytinki, Voimalaitos, Saharakennus and Höyläämö.

Figure 7. Mainiemi saw mill area 1950

Current state and function of existing buildings

Sawmill/Saharakennus (Figure 8).

Figure 8. Sawmill/Saharakennus

Current use: partly as warehouse, mostly empty

Construction period: The oldest part after 1910, extension before the 1950s

Number of storeys: 1 and partly 2

Foundation: concrete

Frame structure: Timber frame

Roof shape: Saddle roof

Roofing material: Corrugated sheet, prevoiusly bitumen felt

Facade: Horizontal boarding

Exterior colors: Brown, window and door lining boards red

Condition: moderate

Special features: Skylights and two different types of windows; 6- and 16-box

Values: The building represents a typical early 20th century sawmill building with a two-storey, rectangular shaped and non-insulated wooden building with multi-pane windows.

The building the style of the building has remained true to the original despite of the changes and expansions made over the years. The most significant change in the façade is about 22 meters long in its southern part, an extension part implemented as a natural part in accordance with the original sawmill building. Over the years during which the white window sills were painted red, a ridge was built on the gable roof and the locations of the doors have been changed. The building has historical building values. It represents a simple, timber-framed industrial construction from the early 20th century.

The sawmill building is the dominant part of the entire area of the former steam sawmill in Mainiemi. Although the building locates to the lower level of the Mainiemi sawmill road, the long facade of the building cannot be missed from the road. The building has scenic values (see Figure 9).

Figure 8. Sawmill interior

Power Station/ Voimalaitos (see Figure 9).

Figure 9. Power Station/ Voimalaitos

The building has played a significant role in the operation of the sawmill as a power source for the entire plant.

The power was transmitted mechanically from the engine room by means of the main shaft to the adjacent sawmill building for work machines. The building represents a typical early 20th century type of power plant that was single-story, console roof and made entirely of brick. As a completely brick building it differs from the rest of the building stock in the area. The building has retained its originals moderately. In the 1950s, a board clad workshop was built on its shore façade.

A gable roof extension is made of similar materials. The building has building historical values. It represents the industrial classicism of the 1920s, with its hallmarks are simple and controlled massaging and facade structuring. Protruding roof rail and curved shaped tops of the windows as well as the red brick are characteristic features of the style.

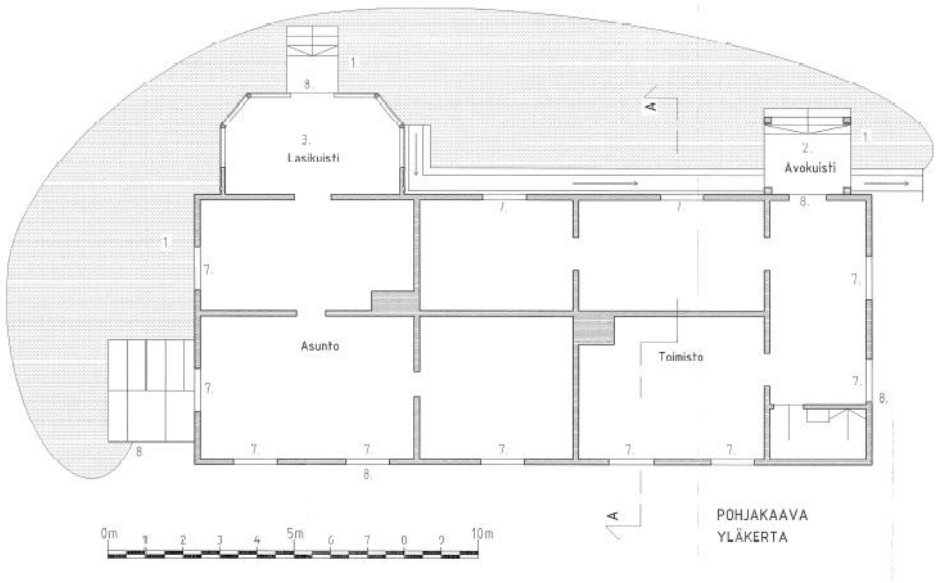
The building has historical values and, like the adjacent sawmill building, is connected to the region and Finland´s sawmilling history.

When viewed from the road, the power plant is behind the sawmill building and its scenic values remain low. However, its more than 30 m high brick chimney is an important landscape factor and a major landmark.

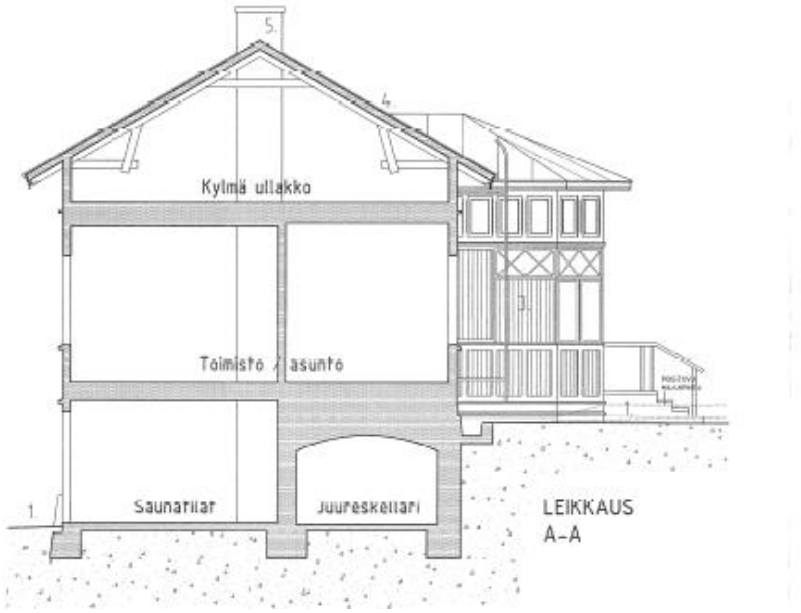
White Pytinki/Valkoinen Pytinki (see Figure 10).

Figure 10. White Pytinki/Valkoinen Pytinki

The house was originally built as an apartment and office for the sawmill manager at the time the sawmill was established in the 1880s. The six rooms on the main floor were for this purpose (see Figure 11). In the basement were bakery, a room for servant girl, warehouses and a potato cellar. When the new office building was completed across the road in the early 1920s, the White Pytinki was converted into a workers' home.



Floor plan 1st



Section A-A

Figure 11. Plans of the building

Current use: residential building

Built in about 1880

Number of floors: 1 + 1 + cold attic

Foundation: Natural stone, later reinforced with concrete

Frame: Logs, short cornes

Roof shape: Saddle with brick roofiing (underneath wooden shake)

Facade: Wood boards divided into three fields, bottom and top vertically, the middle and basement parts horizontally

Exterior colors: white

Good condition

Special features: of the diverse window sills, the potato cellar has a flat brick vault, decorative porch

The white pytinki is a representative example of the architecture and construction method of its construction.

A house built for a property manager's home differs from workers 'homes in its size and facades.

The building has building historical values that are made up of well-preserved stylistic features and overall look.

Sawmill office building/ Konttoripytinki (see Figure 12).

Figure 12. Sawmill office building/ Konttoripytinki

The sawmill's new office building and the property manager's apartment, Konttoripytinki, were completed in the 1920s (see Figure 13). Building is currently in residential use. The building is protected by a town plan.

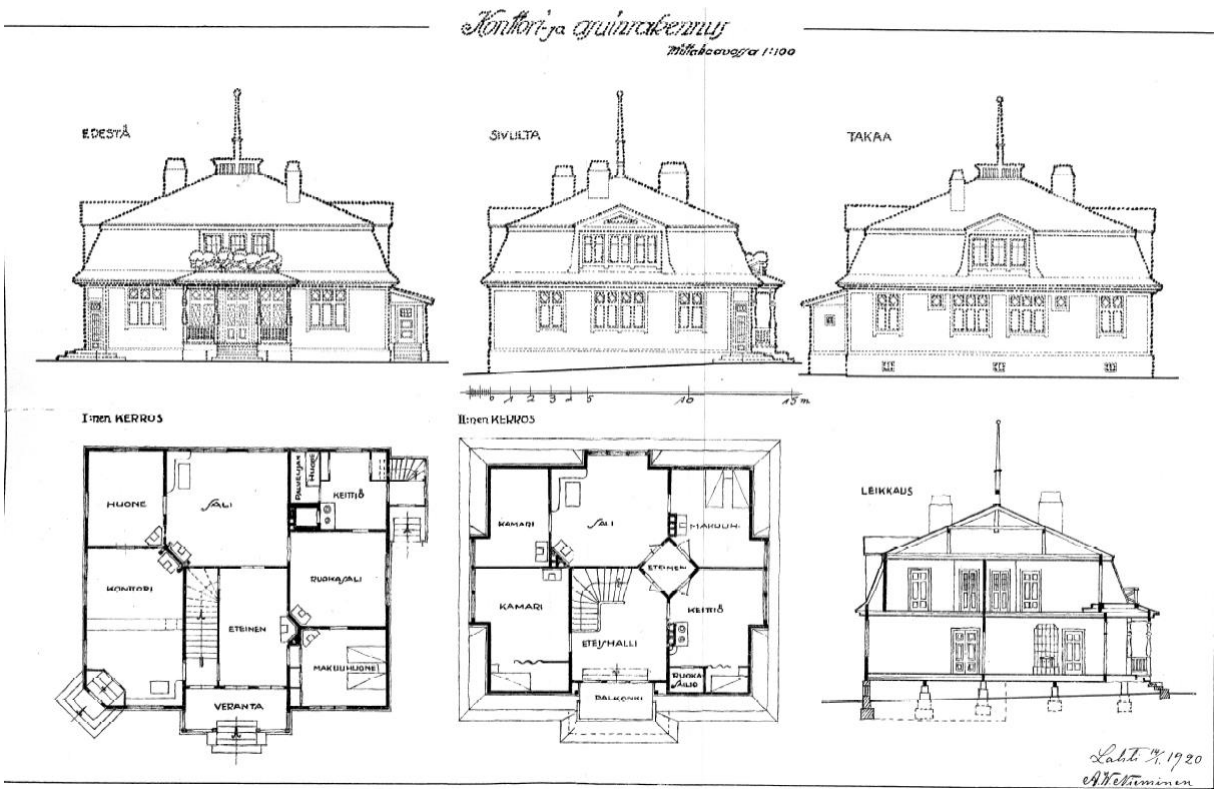


Figure 13. Plans of the building

Planing mill/Höyläämö (see Figure 14).

Figure 14. Planing mill/Höyläämö

The planing mill was built partly on the water in the 1930s to allow the finished lumber to be loaded directly to the barges. In addition to the planing shop, there was a board warehouse in the building, which was built as part of the planing shop´s soutern part. 1982, the superstructure of the water was demolished.

Currently used by the Mainiemi Canoeing Center

Construction time: In the 1930s

Number of floors: 1

Foundation: Concrete

Frame structure: Timber frame

Roof: Saddle shaped, sheet metal (originally bitumen felt and wood shingle)

Facades: Vertically lined wooden boards

Exterior paints: Red soil (faded), mountain boards white

Condition: Moderate

The building has typical multi-screen windows as part of the sawmill environment. The architectural values of the building have deteriorated when the part built on the water has been dismantled. In addition, the former boardwalk facade is lined with tarpaulins and an entrance has been built on the side. The changes weaken the historical values of the building.

A low and otherwise rather modest dark building is easily overlooked by a road user and its scenic values are negligible. However, it has value as part of the sawmill environment.

The scenic values of the building towards the lake have been significant in the past when it is extended over the water. It still stands out in the beach landscape.

2. SUSTAINABLE REGENERATION SOLUTIONS, BASED ON CIRCULAR ECONOMY PRINCIPLES

2.1. User needs

The user needs are combined from two empirical sources.

1) During the intensive week at Padasjoki, students produced different solutions for the new usability of the area. Their work was based on example stories of users of different age and different needs. These example stories were based on the questionnaire committed by municipality, where local people described their needs for the services in the area.

2) Eight workers of the municipality and 3rd sector operators were interviewed based on the student views. Their view compliments the view students have established.

The following analysis and suggestions are a synthesis of these two empirical sources.

Strengths of the area

According to the interviews there is great interest in the development of the sawmill area. Many different actors have enthusiastic ideas, wishes and dreams for renovating the area for new uses. There are many events and activities in the municipal area that people can participate in. Volunteer work is popular in the area. The involvement of civil society has been significant, especially in connection with the developing the community house (vanha koulu).

"on the other hand, the group of volunteers has been expanding all the time. There is still a tight core group that is very committed to volunteer work"

An activity already operating in the sawmill area is Padasjoki Latu Ry:s canoe rental, which is very popular.

"Probably almost 1000 times someone starts a canoe trip from there in the summer. Of course not 1000 different canoes, but one can to go maybe 30 times during that summer, but that means that there is a really good crowd there."

An employee of the municipality has guided sup-boarding and the experience supports the popularity of water sports.

"Myself, I've been guiding sup-boarding for a few summers now. It came to us a bit like new. It was really, really popular. Every summer it is really popular and we need more of these kind of services"

Challenges of the area

The interviewees also brought up challenges, or rather points to be considered and possible risks in the development work of the area. The challenges are divided into structural, social and business issues.

Structural matters here refer to both the concrete condition of the buildings and the group of actors who could cooperatively plan and implement a set of services that looks consistent to the user. Examining the technical condition of the buildings alongside the renewal plans is of course of primary importance not only from the point of view of costs but also from the point of view of technical feasibility.

Abstact structures i.e. the network of actors and the methods of implementing services, made the respondents think. The area from the Caravan area to Laivaranta was perceived as a fragmented whole. In the discussions, people were urged to beware of the development direction in which many different actors would market their own service.

The accessibility of the area divided opinions, but a point must be taken into account, as well as the placement of parking spaces in the area.

"But for this population, which is growing more and more all the time… some people do not have a car for financial reasons and some for reasons of choice, and for some the family car is used by the person who works and the rest of the family walks"

From a social point of view, it was considered important to note that all population groups will be taken into account. In particular, the activation of families with children needs more attention in planning.

A purely tourism-driven solution was thought to cause a negative emotional impact among the local population.

"people here dislike plans, which only support tourism"

It was considered important that a possible solution offers genuinely needed services for local residents, leisure residents and tourists.

From a business point of view, the interviewees talked about the competition. There are restaurants in the area. In a small community, the competition between many actors is problematic, although it is of course a natural part of society. We also considered whether any of the entrepreneurs in the area are willing to expand their operations to the area of the sawmill or organize temporary restaurant services in the area in a pop-up manner.

The importance of marketing was emphasized. It was also seen as the municipality's task.

2.2. Regeneration solutions (alternatives)

We classified wishes for various services under the concept of well-being. We feel that the social, physical and psychological division of the division is suitable for the division of services. The student groups started developing the services during the intensive week. As instructors, we have complied these into three service packages as follows. In the urban regeneration part we shall explain, how the services should be suited to the real estate in the area.

Services we suggest are not categorically named as belonging to social, psychological or physical, because these are all present in all activities. Questions related to social groups and the community naturally belong to social wellbeing, and water sports to the promotion of physical well-being. Nutrition-related services are strongly attached to everyone.

The interviewees took a position on the area's activities (=services) based on the students' presentation. In this report, the results are divided into ongoing services and events. In addition, considerations regarding space requirements are presented.

The presentation compiled from the students' presentation received support (see Figure 15).

Figure 15. Placement of the suggested services on a map

1) In sawmill building there is a cultural centre, a museum and a winter garden. It is wished, that the sawmill building is a place for events as concerts and other community happenings. This approach is selected to support in particular the social sustainability.
2) The water sports center is connected to the current kayaking center. The real estate should be renewed so, that it allows kayak strorage and rental activity. Renting is an ideal choice for owning, and therefore following the principles of sharing economy. This view supports the economic side of sustainability.
3) Third activity according to the plan are restaurant services connected with a possibility to use a public sauna. The restaurant is wished to locate in the red brick building. The restaurant serves locally producted food, and therefore supports circular economy principles specifically through environmental aspects of sustainability.

One interviewee saw, that examples from other parts of Finland should be utilised at Padasjoki as well. Water sports center could be later on expanded to include other activities as sauna as well.

"And it's like that in the cities too, like in Helsinki there is a huge complex by the sea, where there are saunas and systems, and it's made just so that you can't get out of the middle of the hottest city center, go there, hang out in swimmers and swim in the sea basically and that's it. And in Tampere it's the same in Ratinanranta, the same kind of sauna. It's really hard stuff right now."

Padasjoki sounds like a village of events and groups. There is a lot of activity on offer and it attracts participants. In the space planning, it is hoped that the area will have a warm, safe and large enough space for organizing municipal events.

As a new addition to the students' presentation, a regular market day was presented. This could function as a part of the restaurant complex and offer possibilities to sell locally produced food products on “pop-up” bases.

"And for that, the municipality together with other entrepreneurs can organize these market days, for example every first Saturday of the month or even the first of every second month. We're such a small municipality anyway, it's not that easy to create things like this and at least try. You just have to get the places in order. Maybe that's it.”

2.3. Assessment of alternatives

Discussing strengths, weaknesses and the content of activities was generally clearer than who or what and with what structure could kick-start the development. There are many potential actors, but no one has the capacity to take responsibility for the development of the whole area. Developing a small slice piece by piece was thought to increase fragmentation. On the other hand, it was thought that controlled phasing of the development would be wise.

"A lot has been wanted to be done and tried to be done over the years, but when it usually falls down, at some point, and even if this is covered, I would like to think in a very reduced way that you would not send it from somewhere, even from the cultural center and move it there that something. If it did start a little, can you think about what you would invest more, what and where you would look for an entrepreneur. Let's hope something doesn't take off a little early, so the next one won't take off either."

A network of actors needs to be created and a leadership structure for its management is needed, so that the region is unified. The actors mentioned were the municipality, associations, companies, volunteers and educational institution cooperation through interns and apprenticeships.

The role of volunteer local residents (and cottagers) in the development work was seen as essential, because through participation, it binds locality to an otherwise possibly (and hopefully) company-led entity. The locality also guarantees the possibility of year-round activities, which would otherwise be dependent on the summer season.

It was hoped that the municipality would take some kind of role, e.g. in marketing. The role of the municipality was seen as somewhat contradictory:

"So, for example, we (municipality) have all summer activities open to everyone. And from time to time it has been thought about what the price would be if we sold our services. We don't have that, it's just that we've done the same productization from our know-how. It was quite possible. Of course, if there was an entrepreneur, the municipality can't compete."

The interviewees hoped that an entrepreneur or two would develop the restaurant business and the program service/nature tourism. A concrete initiative was also found: A canoe rental based on volunteer activities would be ready for cooperation with another association or entrepreneur.

It is easy to agree on the overall picture of what is left of giving interviews: The content and ideas are clear, motivation can be found in many, but few have the know-how and resources alone to blow wind into the whole. Rather than new content, development needs structure and coordination and, of course, money.

One gets the impression that the business potential lies in restaurant operations, accommodation operations and the already functioning water sports, which are hoped to be expanded into nature tourism and program services.

The sawmill itself appears sympathetic to many as an important cultural site, for the future of which it is more difficult to come up with an unambiguous new life. Since connecting locality was felt to be very important, the possibilities of civil society and participatory budgeting come to mind. A freely (but guided and organized) organization based on volunteerism could, within the limits of expertise and realism, renovate part of a whole sawmill and maintain a chosen activity, perhaps small farming and a market day.

CONCLUSION

There is a profound link of mutual influence between urban and social regeneration.

With no doubt, urban regeneration has the potential to improve the life of citizens in Padasjoki. In this case we can describe the effect of this relationship by referring to the case study.

The ultimate privilege at Padasjoki from the viewpoint of social regeneration is strong and well-functioning civil society.

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