



NIEMELÄ

where urban life meets nature

DEVELOPMENT PROPOSAL FOR
CITY OF HEINOLA
SUBMITTED ON 30TH APRIL 2022

PROPOSAL AND REPORT PREPARED BY
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Heinola is a town and a municipality located in region of Päijät-Häme, Finland (Figure 1). It is situated in the union of two lakes. The town wants to develop the shoreline of Niemelä which is located near to the city center, within walking distance.

The water borders the area on the west and on the east it limits with a residential area. The southern part of the area is connected to the center of Heinola and has a more urban structure. Going north, the area is covered with more woods and thus puts emphasis on recreational use. The river is part of Kymijoki and it connects the lakes Ruotsalainen and Konnivesi. The Tähtiniemi bridge, along which Highway 4 runs, is north to the area.

The vision for the development of shoreline of Niemela is based on seven objectives:

- Better Use of the Lakeside
- Connections to the City Center
- Finding Places for New Buildings
- Defining the character of the new housing area, master planning
- Boating Facilities
- Recreation
- Cultural Heritage and Nature

INTRODUCTION

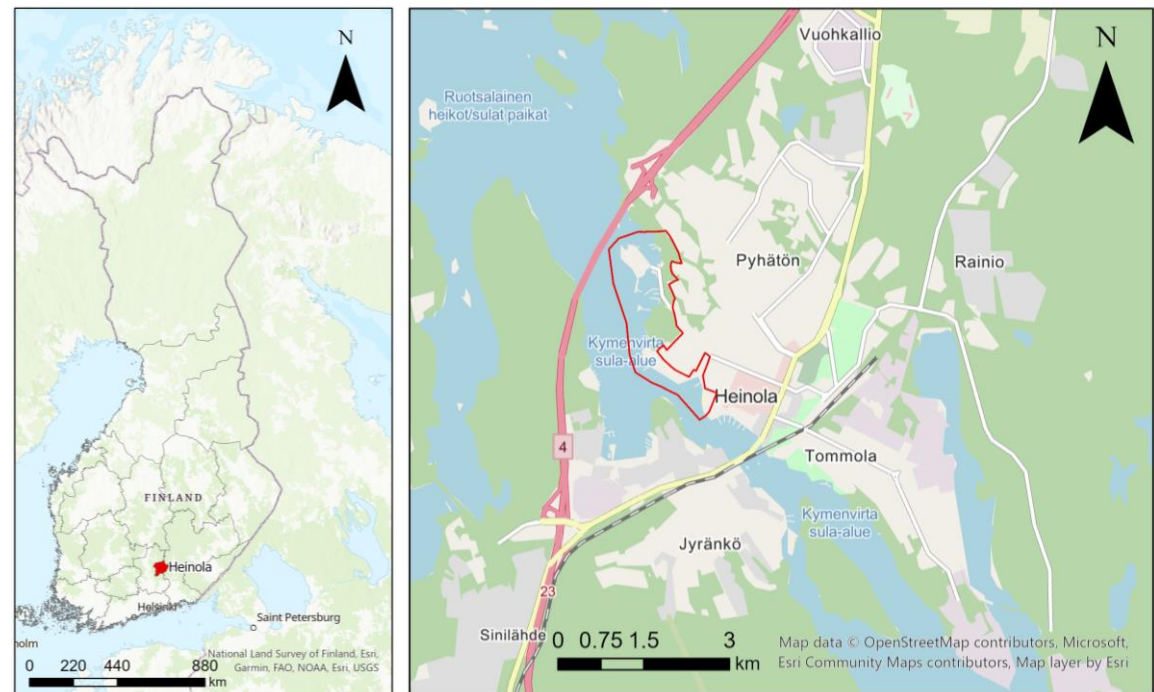


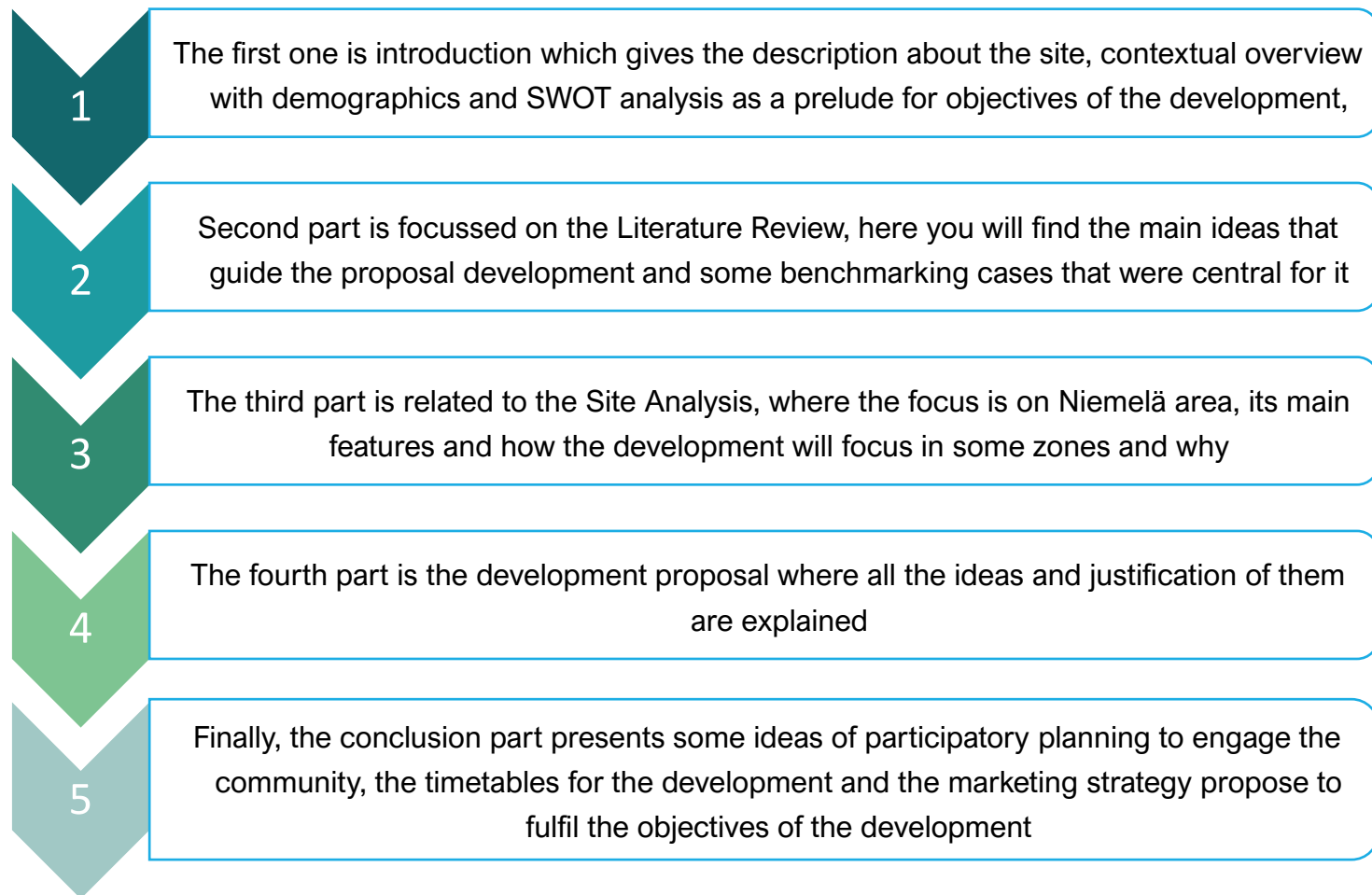
Figure 1: Location of Heinola city

Source: personal elaboration



REPORT STRUCTURE

This report is divided into five major parts



DEMOGRAPHICS

Though Heinola is the third largest municipality after Lahti and Hollola, in the Päijät-Häme region, its population is continuously decreasing (Figure 2). According to statistics, since the end of the 20th century the population has reduced in more than 3.000 inhabitants. Being the last record, of 18.349 on December 31, 2021.



Figure 2: Heinola Population

Source: modify from Heinola, 2022b

Figure 3 shows how this population is divided into age categories. Childrens below 17 years old, represent the 14 % . More than half of the population are adults ranging between 18 and 64 years old, which is considered to be the working age. The rest, which represent a third of Heinola’s population, are elderly people (above 65 years).

Despite the drastic decrease in population, the Regional Council of Päijät-Häme have people who want to invest in the development of Niemelä. One of the reasons could be that there is a high potential of tourism. The comparison of population policy report between 2004 and 2017, showed that the birth rates have fallen to historically low levels, but the net immigration has tripled.



In 2017, value added by tourism in Finland economy was 4.6 billion euros which is quite less as compared to countries like UAE or Switzerland. The development of Niemelä area can add value through tourism in the Finnish GDP. Moreover, the development will create lots of jobs for people living in Heinola.

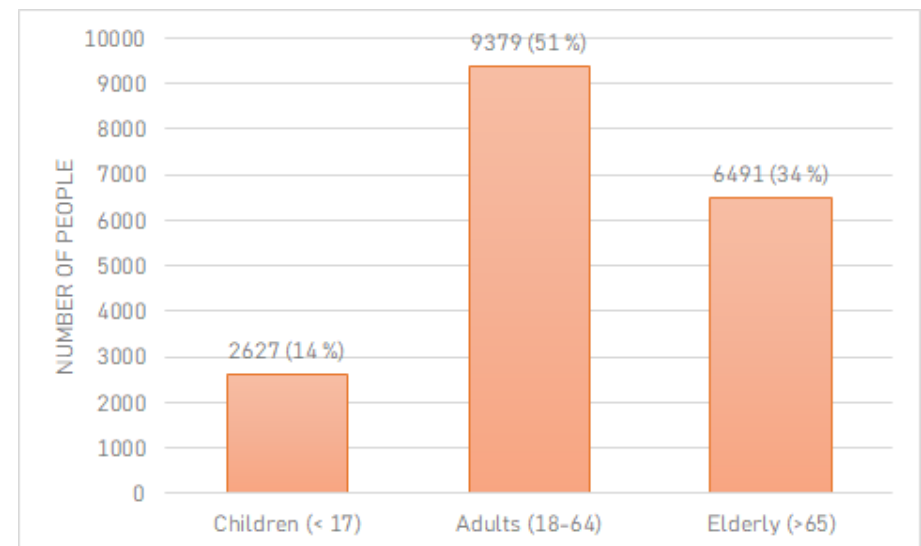


Figure 3: Population per age category

Source: elaborated in based of Heinola, 2022b

SWOT ANALYSIS

To evaluate the characteristics of Heinola, a SWOT analysis was done (Figure 4). SWOT analysis predicts that the following things:

- Main strengths of the site are the water element, light traffic paths and existing infrastructure.
- Coming to the weaknesses, they include noise from the highway bridge, shortage of recreational facilities around the river and lack in the variety of housing.

- Biggest Opportunity of the site is that it is close to the city center. Another opportunity is that investors have interest in the area to develop floating construction.
- The main threat is that the population is declining, and the age is increasing, but the aging population may also be an opportunity for Heinola, as the elderly community generally has good savings which actually implies that they have high buying power. These people can be the potential buyers of houses and cafes etc.,

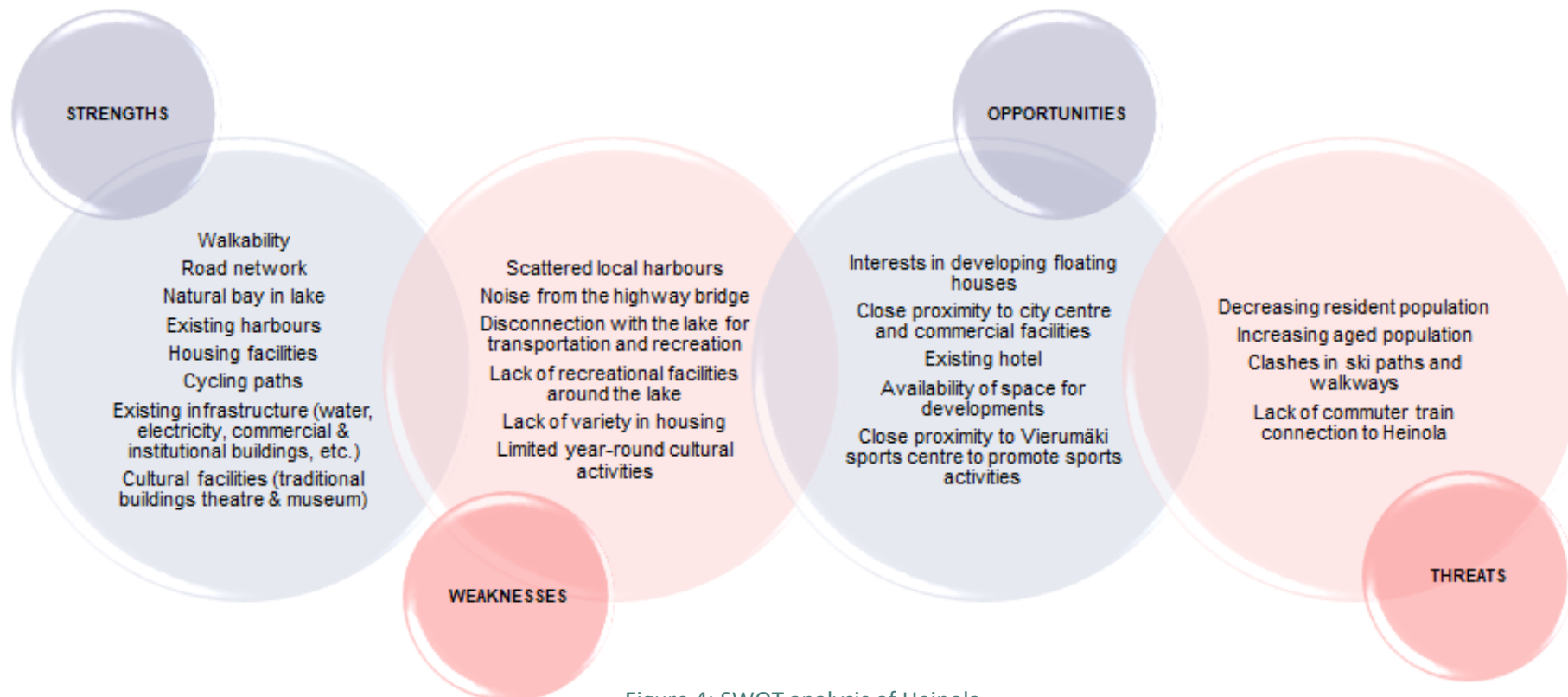


Figure 4: SWOT analysis of Heinola

Source: personal elaboration.

A driving idea that it was used in the Niemelä proposal is the Place making idea (Project for Public Spaces, 2012). It consists in making the places centred in people, where urban design is based in the surroundings characteristics, the usage of the public places and the conception of neighbourhoods where everyone is welcome and have a place to be. To do so, you need to address the design in six dimensions: morphological, perception, social, visual, functional and the temporal one (Puren, 2021)

One of the main ideas of a sustainable development today is the walkable communities and to incentive the uses of different methods of mobility (Cysek-Pawlak & Pabich, 2021). This concepts currently are key for big cities but also for new developments that seek the sustainable goal. In this sense the project in Niemelä will try to enhance the uses of pathways to put the population not only in movement, that is healthy, but also in contact with the nature (river shoreline and forest).

Currently there are a lot of examples where redevelopment or regeneration project are done to attract population for different uses. Some of them concentrated in attracting tourism other to retain or regain population (Colantonio & Dixon, 2011). There are several cases in Finland like Arabianranta, Mikkeli and Hyvinkää, each one with different complementary strategies (Säynäjoki, Inkeri, Heinonen & Junnila, 2014; Sepe, 2014). In Heinola, this is a major concern as the population is shrinking and one of the goals of the municipality is to attract new inhabitants. In regard to this, the new development in Niemelä could contribute to achieve this goal in a way that the development of Niemelä has a double role



LITERATURE REVIEW

to attract tourism but at the same time make an attraction point for families and locals to enjoy the shoreline and the forest in the area.

One central idea for the Heinola case is to incorporate the river shore into the day life of the inhabitants in the city. The idea is to use the shorelines as an asset in the project and to solve other problems. Having in mind the Green Shores project in British Columbia, (Stewarship Center, 2021) the Niemelä project will focus on achieving a good interaction between the shoreline and the life of the population.

In order to get people to move to cities, there must be jobs or some other reason to move there. Different housing solutions are one temptation to move people to a certain place. Floating houses is this kind of new way in Finland. For example, a detailed plan has been drawn up in Loviisa to enable floating residential construction. In the feedback process provided by the participants during the plan process, the floating construction was perceived as innovative attractiveness of the region (Mäntysaari etc, 2020, 54).

BENCHMARKING: LOVIISA, THE QUEEN'S SHORE

In 2023, Loviisa will have Finnish Housing Fair and the area is called The Queen's shore. This area is on the shores of the gulf of Loviisa. The area is structurally comparable to the Niemelä area, with some central similarities:

- Area is close to the city central
- It is easy to reach by light traffic
- Recreation area
- Waterfront area
- Interest of floating buildings
- Marina.

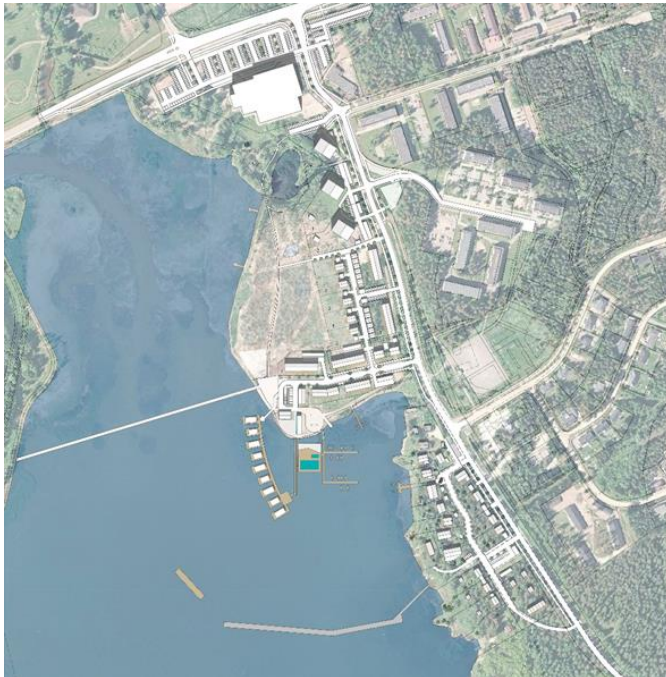


Figure 5: Illustration the Queen's shore
Source: Loviisa, 2020.

Construction in the Loviisa area is grouped into different areas. There are areas reserved for small houses, terraced houses, apartment houses and floating houses with pool area. At the same time there are a lot of recreational areas. Figure 5 shows the structure of the area.



Figure 6: Illustration of floating buildings in Loviisa
Source: Bluet Ltd, 2020

Floating construction requires special expertise and special solutions. Floating construction design should take into account prevailing wind, wave, flow, ice and temperature conditions. The materials are chosen to be durable, long-lasting, maintenance-free and energy-efficient. The anchoring of floating buildings must also be carried out in an environmentally friendly manner. (Mäntysaari et al, 2020) In the case of floating residential buildings, the water depth must be -2.4 m in order for the structures of the buildings to be able to float (Bluet Ltd, 2020). In figure 6 is an illustration of the floating buildings in the Queen's shore.

The soil in the planning area is mainly sandy moraine with rocky parts. The southern part of the area has a rough sandy soil. The soil of the area is suitable for building. To save rocky areas, construction could be placed outside of them (Figure 7).

Figure 8 shows the water depth of the planning area. The dashed line closest to the shore means a depth of 3 meters. Longer dashed line at a depth of 6 meters and a solid line at a depth of 10 meters.



SITE ANALYSIS

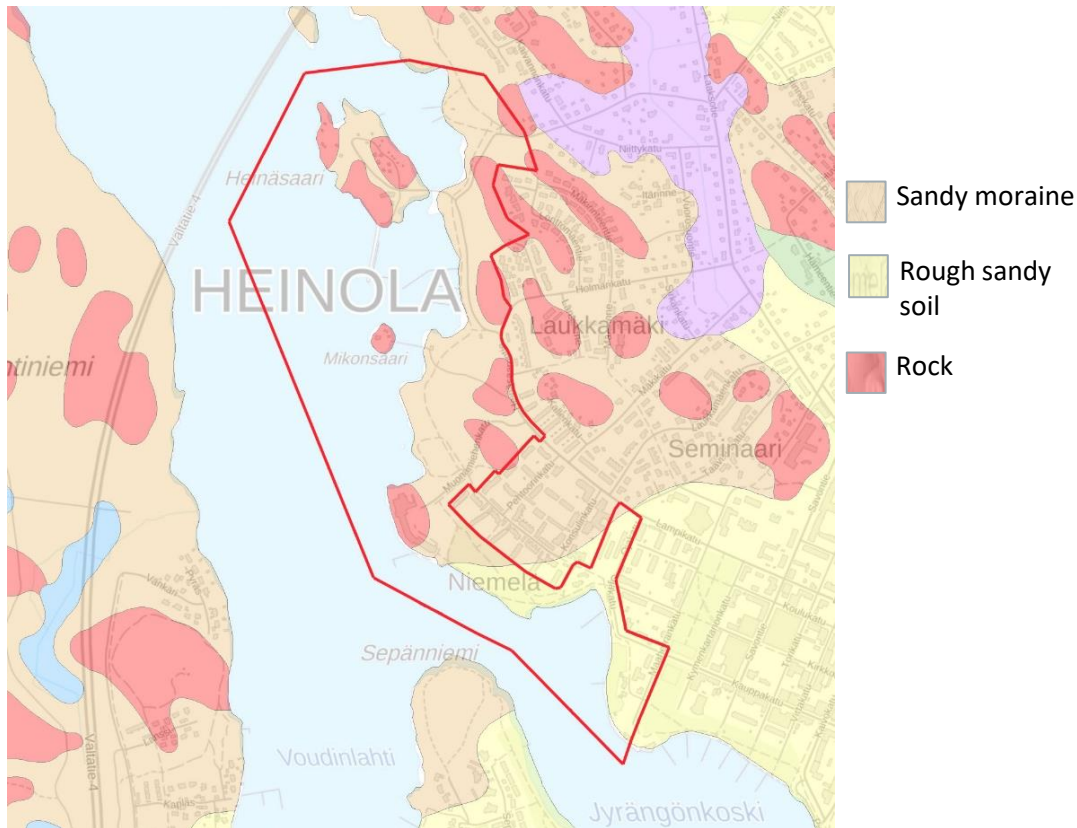


Figure 7: Soil characteristics
Source: Soilmap, GTK



Figure 8: Water depth
Source: VESI.fi.

In the detailed plan (Figure 9), the area is allocated mainly for recreational use, marina activities and buildings reserved for commercial and public use. The guest marina is located next to the campsite. The hotel is located in a commercial area. The areas which are reserved for public buildings are unbuilt (light pink area in planning area).



Figure 9: Detailed plan Niemelä area
Source: Heinola Municipality (2022)

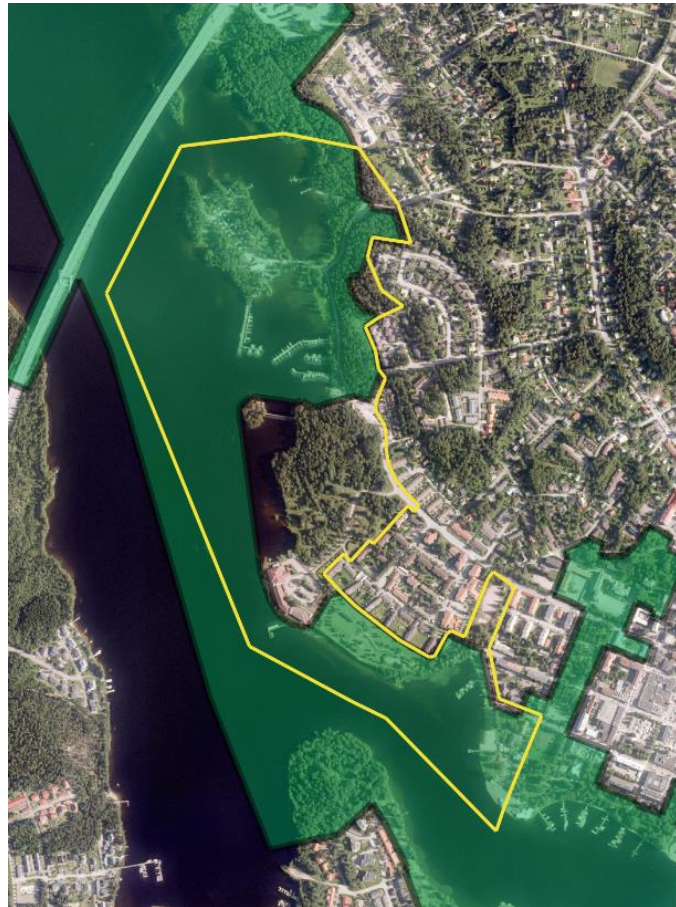


Figure 10: Heinola National Urban Park
Source: Heinola Municipality (2022)

Niemelä is part of the national urban park. Heinola national urban park was established on May 6, 2002 by a decision of the Ministry of the Environment (Heinola, 2022a). The special features of the national urban park are the historical parks, the heritage of a spa and seminar town, an environment related to traffic history, a bird sanctuary and sites of significant natural value. In Figure 10 the green area is part of the national urban park.

The planning area is located near the center of Heinola and it is the waterfront area, is mainly a recreation area except the hotel, the camping area and private island. There are two beaches in the south and north of the area. There are two marinas one in the north of the area and one outside of it (Figure 11).

Niemelä area is divided into two parts. Forest area from the hotel to north and park area to the south from the hotel.

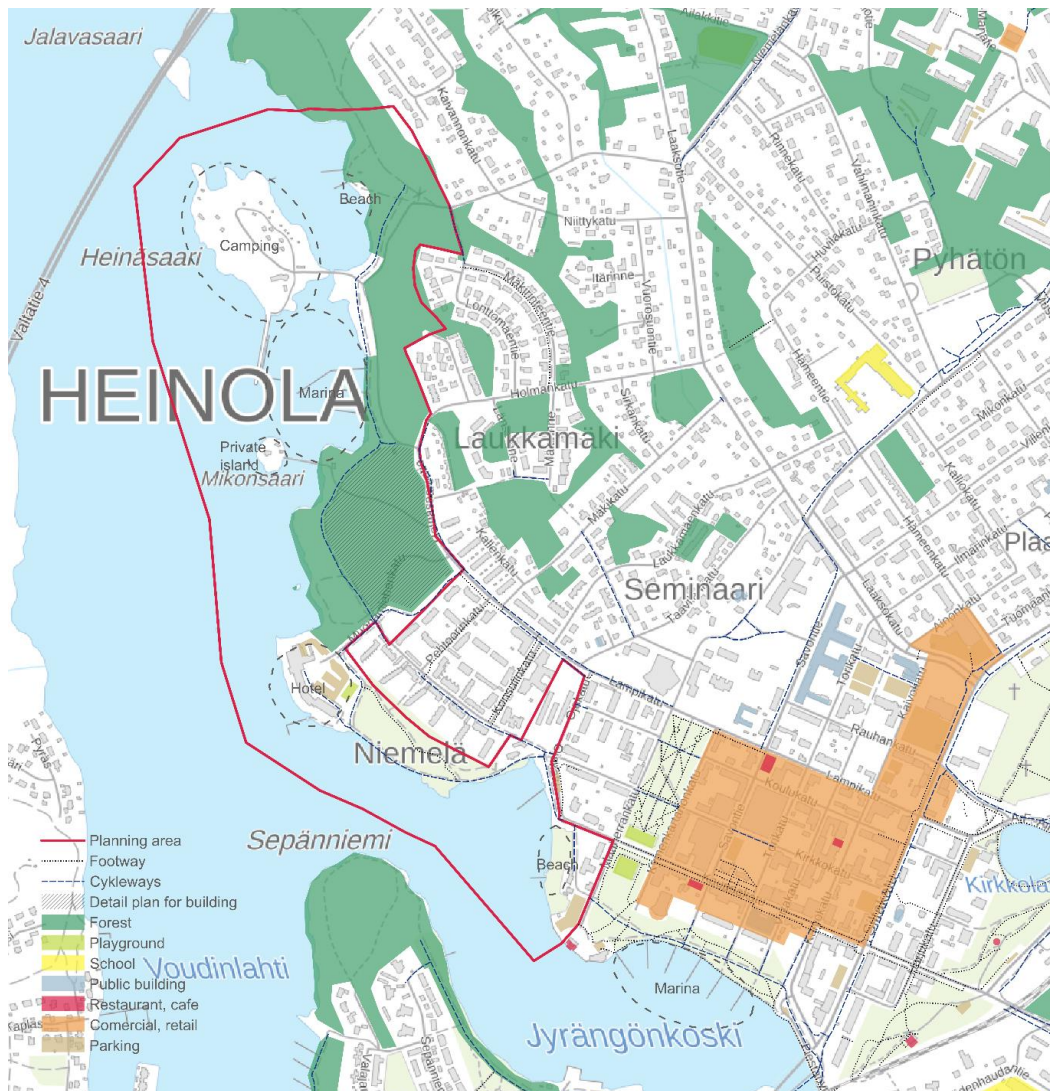


Figure 11: Site Analysis

Source: personal elaboration based on © map/MML

Light traffic routes pass through the area which could be used for the development of the area and support the recreational use. In the middle of the planning area there is zone, which is reserved in the detailed plan for building, but area is still unbuilt. This undeveloped area it could be good according to the soil map for the construction.

The aim is to develop the area in such a way that the hotel, private island and camping area are preserved. The existing beaches in the area also retain their place. The central part of the area delimited by residential areas is suitable for construction due to good building land, location and transport connections. Existing roads that run through the hotel should be considered in the planning. At the beginning of the road leading to the central part of the area, it would be possible to place public buildings where the new area would join the existing structure.

It would be possible to place floating residential construction in the area between the hotel and the private island. The location would be good for roads as existing routes could be taken as an advantage. The location of the floating construction should take into account the depth of the water and, if necessary, the area should be dredged to achieve the required depth.

The campsite in the northern part of the area creates opportunities to develop the sheltered cove next to it for recreational use by both tourists and residents. The frisbee golf course in the area has been taken into account.

The vision for the development is,

“To create an inclusive recreational and habitable place that attracts and retains a community of locals and revisiting tourists, which celebrates the natural assets of the landscape”.

DEVELOPMENT PROPOSAL



Figure 12 visualisation of an overview of the development proposal.

Source: personal elaboration.

THE MASTER PLAN

The idea with this project is to create a place that attracts people, not only as new residents or tourists, but also to inhabitants of Heinola. To do so, we present a proposal that changes the focus to the natural assets in Niemelä, to incorporate the forest and the shoreline into everyday life.

Moreover, the area must be attractive all year round, and to do so, each space must have the effects of seasonal changes incorporated in their design. The final aspect considered is the need for sustainable development that would yield short term and long-term benefits, economically, socially and environmentally.

Figure 13 shows the general plan for the development. The area was divided in three subzones: North, Centre and South.



Figure 13: Master Plan for the Development Proposal
 Source: personal elaboration

SOUTH ZONE

The South zone is the nearer to the city centre of Heinola and is surrounded by residential complex, also there is a beach, boats piers and one pathway in the lake site. To enhance the area and achieved the goals of this development there are four major changes. A soccer field is incorporated in the area for summer activities that will be converted into an ice ring during the winter; in the shoreline

we incorporated areas where people can spend time observing the lake, to do so we include fireplaces and benches; there is also an extra pathway to be exclusive for cross-country ski or cycling, according to the season; finally, a coffee shop in the middle of the area. Figure 14 shows the detail plan and some photos to illustrate the intervention proposal.



Figure 14: South zone detail proposal.

Source: personal elaboration

Figures 15-20: Visualizations of activities

Source: Google images



Fig 15



Fig 16



Fig 17

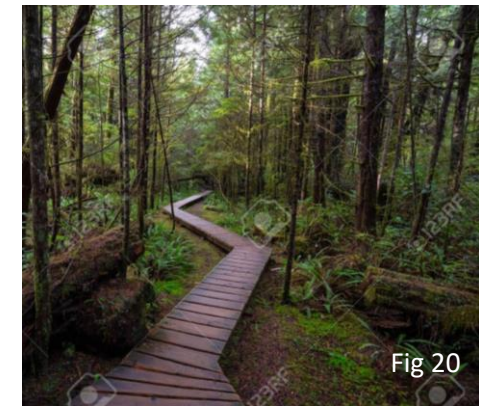


Fig 20



Fig 19

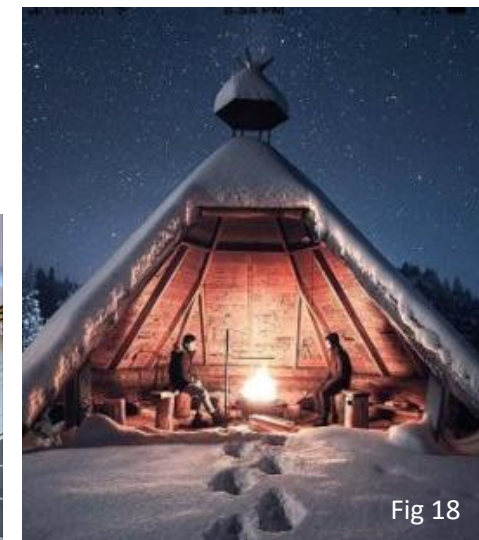


Fig 18

CENTRAL ZONE

The central area consists of most built spaces proposed for this development, including the housing development and multifunctional buildings with community facilities and rentable co-working spaces. This also caters to the continuation of the two pathways for leisure walking and other activities to make a cohesive rearrangement of the park area. Figure 21 shows the detail plan and some photos to illustrate the intervention proposal related to the building environment.

Creating a variety in housing is a key aspect in this development. So, we are proposing to have some floating houses towards the south, along with some cottages and town houses that would cater to different user crowds with different interests (Figure 22). By orientation and by using the natural level differences in the terrain, (Figure 25) we can ensure that all these houses get a proper view of the lake, despite their distance from the lakeshore. These houses would also include sauna facilities and the boat houses would have direct access from boats. The idea is that these houses could easily cater to the needs of a holiday retreat as well as a standard house for a young family or retired people looking for a soothing environment to live in, during all seasons.

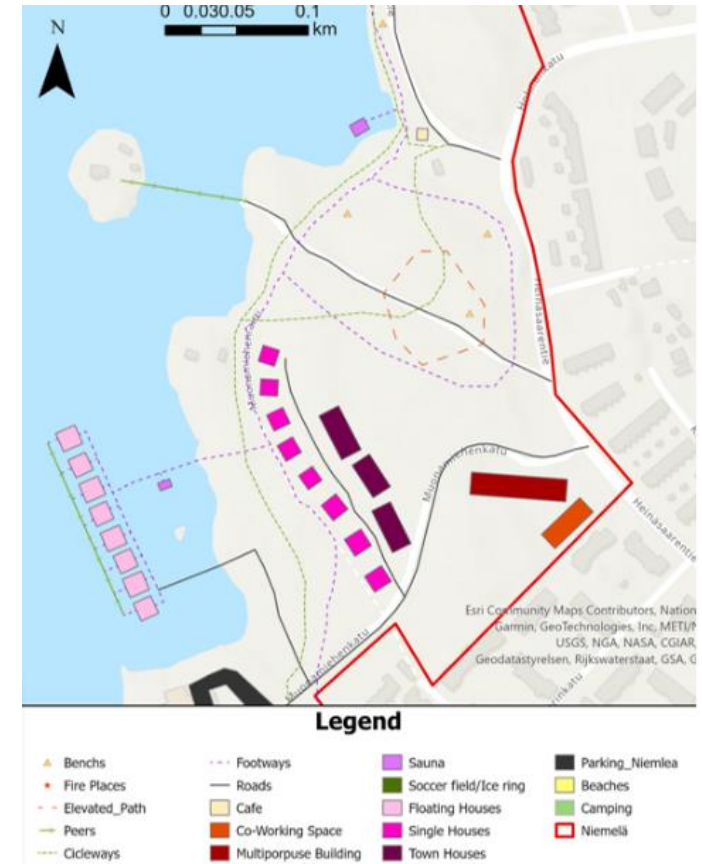


Figure 21: Building environment detail plan.

Source: personal elaboration.



Fig 22



Fig 23



Fig 24

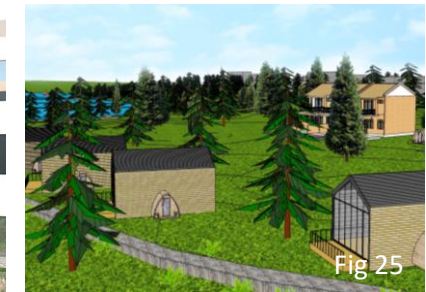


Fig 25

Figure 22-25: Visualizations of housing facilities
Source: Google images and personal elaboration

The idea of creating multifunctional buildings is a need we identified for this area to ensure that the built spaces would be socially and culturally inclusive to all communities in Heinola. So, we are proposing to have a community centre at the south-east end of the central zone where the natural formation of boulders can be used for outdoor activities in the summer and could be used to create an amphitheatre for cultural activities.

We are also proposing to have co-working spaces targeting the entrepreneurial crowds in the area that creates an attractive informal office space and which could be rented out to generate revenue (Figure 28). So, these buildings and spaces would be multifunctional and adaptable for different uses.



Fig 26



Fig 27



Fig 28



Fig 29

Figure 26-29: Visualizations of multifunctional building facilities

Source: Google images

This also creates opportunities to engage the locals and elderly crowds as service providers for place specific activities like crafting, that would be attractive to tourists as well.

About their construction, we are proposing to use locally sourced timber to ensure sustainability and maintained visual identity of the place. The buildings would also visually merge with the nature and where possible, they constructed on elevated structures to ensure minimal impact to the ground and to maintain natural runoff of rainwater. We are also proposing to have renewable energy like solar power for buildings and rainwater harvesting as sustainable practices.



Figure 30: Visualizations of multifunctional buildings on site

Source: personal elaboration

The park area transformation is an enhancement of the current forest, particularly focusing on an integration of the area and activities with some sustainable goals. The proposal presents several pathways to be used by pedestrians, cycling, ski and snowshoeing and the most novel one is an elevated path which could be a symbol of the area. Other activity for the area is frisbee golf which already exist, but it will be improve.

Finally, the idea is to install education sign with information about the natural environment of Heinola and particularly of Niemelä (geological history, flora and fauna, cultural heritage). In the connection with the north side there will be a public floating sauna with access to the lake and a coffee shop. Figure 18 shows the detail plan and some photos to illustrate the intervention proposal related to the park interventions.

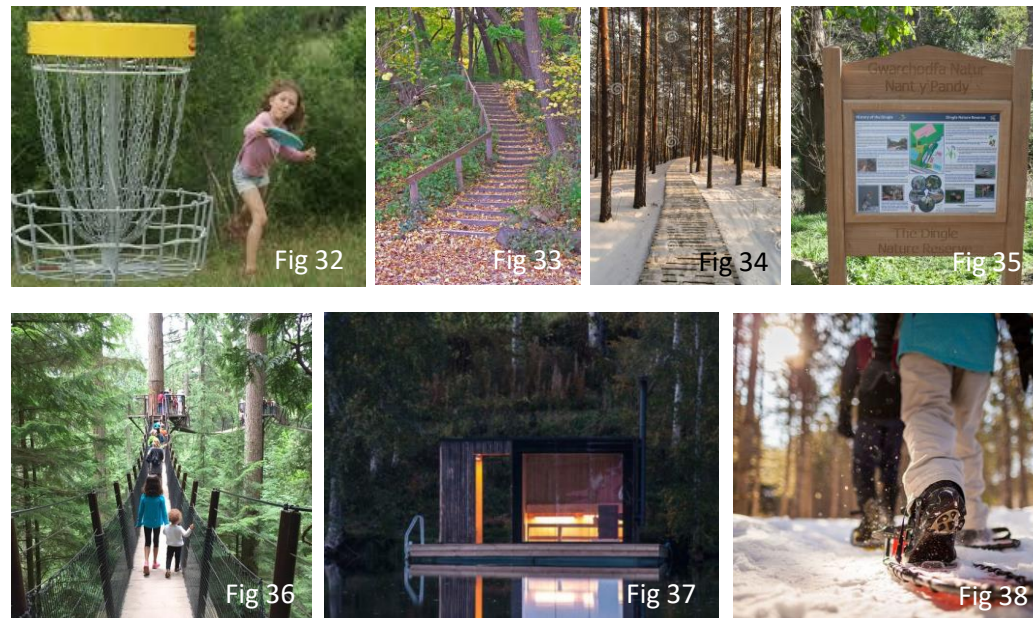


Figure 32- 38: visualisation of year-round activities with the forest
Source: personal elaboration



Figure 31: Park detail plan
Source: personal elaboration

NORTH ZONE

The north area is the one destined for the recreation site. The first substantial change is to move to the northern bay all the boats pier and leave the southern bay to be completely redesigned for recreation purpose. In this sense, the idea is to have this area nearer to the local population and at the same time accessible for the tourist that are going to the camping site.

The proposal is to develop a beach in the bay, the continuation of both pathways (that will connect all the project). All the pathway in the proposal will be illuminated with photovoltaic light regulated with sunlight switches. The area will also have two floating pathways that will connect the camping site and the shoreline and generate an exclusive swimming area. Several benches will be placed in the shoreline to be able to enjoy the view of the lake. Also, there will be two areas with fireplaces to spend more time, one in each bay, particularly in the northern bay will connect to the new area for boating.

Finally, in the main bay aquatic activities will be encourage like kayaking and paddling. Figure 19 show the detail plan of the north zone and example photos of the intervention proposed.

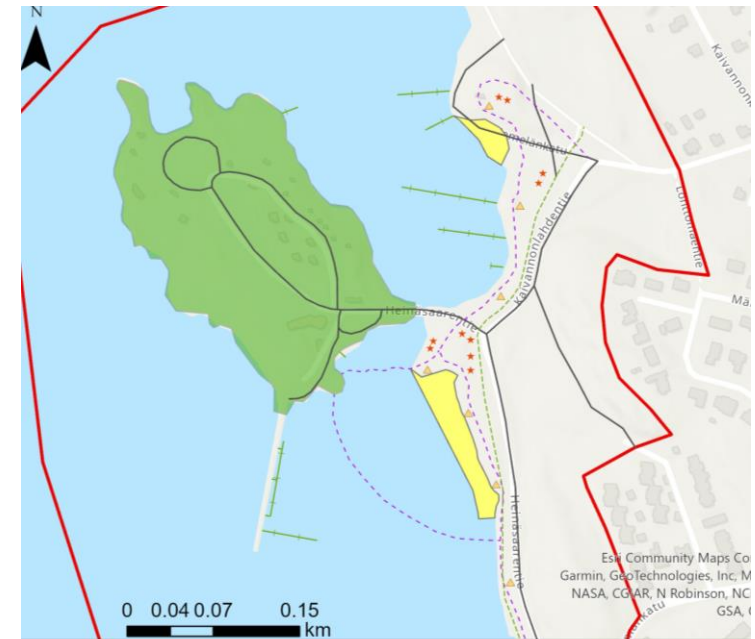


Figure 39: North zone detail plan

Source: personal elaboration



Figure 40- 47: visualisation of year-round activities with the lake

Source: Google images

SUSTAINABLE DEVELOPMENT APPROACH

This proposal also complies with some key Sustainable Development Goals (SDG) outlined by the United Nations (sdgs.un.org). SDG 8: “promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”, is achieved by creating opportunities for the local residents and immigrants that could visit Heinola for employment opportunities, to participate in its economy as service providers, maintenance and other allied facilitating services as well as through entrepreneurships and remotely-working with the post-pandemic work-from-home possibilities.

Due to the inclusive nature of the activities proposed in the development, a wider variety of people ranging from the elderly to the youth with diverse skills and experiences from different socio-cultural and educational backgrounds can participate, which also builds a unique character to Heinola that contributes to marketing as an attraction for tourists and potential residents.

SDG 9: “Build a resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation” is proposed to be touched upon in this proposal by promoting to preserve the natural assets and to rely mostly on local produce of timber as a raw material for the constructions, while proposing to improve the public transport network and walkability. SDG 11: “Make cities and human settlements inclusive, safe, resilient and sustainable” is another aspect that is considered in this project.

Although the housing in the development area is targeted for higher income groups, the larger Heinola region could develop to cater to the growing populations by providing affordable social housing facilities. The recreational activity-based development in Niemela however targets tourists for camping and an engaging space for all populations both local and visiting, which would contribute to social sustainability, community building and resilience of the area.

In addition, SDG 12: “Ensure sustainable consumption and production patterns” should be practiced as an element of the development to ensure that the development does not damage the natural assets of the area, especially the forest, river and the fauna. Achieving this would be crucial since the proposal is to fully integrate the activities and built spaces in Niemela with the nature, as the key character of the development.

Due to the small-scale of the development, application of SDGs in their full-outlined scale is not possible. However, the proposed development for Niemelä promises potential to integrate the above-mentioned goals as guidelines for its envisioned growth.

Local residents can be involved in the planning in many ways. The most important thing in participatory planning is that the participant feels that he or she has been able to influence the planning. On the other hand, inclusion also enhances data acquisition and can help an organization save on the cost of change projects. In general, effective communication between parties from different backgrounds in the absence of a common language is challenging in design projects. (Heikkilä, 2016.) In Master's thesis of Janni Heikkilä (2016) is created a toolbox for participatory design for change processes in knowledge work environments. It offers a range of tools for communication, for collecting data, managing the project and emotions. Here are a few examples of how residents can be involved in planning:

- Inquiry or survey
- workshop
- affect by selection
- project wall
- take a walk in the planning area.

The survey could be used to obtain information about the area. In particular, a GIS survey could be appropriate to support planning so that participants can present issues related to the area on a map or with the help of a map. In a web-based GIS survey, participants could be asked in particular what you do in the area and what would you do in the area. The idea is to ask participants what you do and not what you need (Heikkilä, 2016).



CONCLUSIONS

The workshop will involve the resident in brainstorming the area. The aim of the workshop work would be to get tacit information from the participant for the designers. (Heikkilä, 2016.) Influence the choice, as in, give participants options on something to be planned for the area, such as what kind of park benches for the area could be selected and these could be voted on by the participants. According to Heikkilä (2016), voting is not the best solution for involvement, but it could be included in the workshop work or area survey.

By project wall it is meant that a website is created for the project, for example, where you can follow the progress of the project and leave feedback about the project or design (Heikkilä, 2016). If there are a lot of people moving in the area, you could also use a physical notice board for the area, where information about the area's planning is also updated. This also creates potential to reach out to the elderly populations in the area.

In planning urban environment could be helpful to some participants to take a walk in the planning area with planners. Especially in conflict situations, walking in the area may help solve planning problems (Heikkilä 2016). Walking can easily explain the plan for the area on site and thus gain confidence in the plan.

A particular event that we thought it could help to the population to identify themselves into the area is a contest for urban art in Niemelä where the local community will be the judge. In this way the population can be part of the urban design of the area in the sense of place making (McCarthy, 2016; Monclús & i Bassols, 2006)

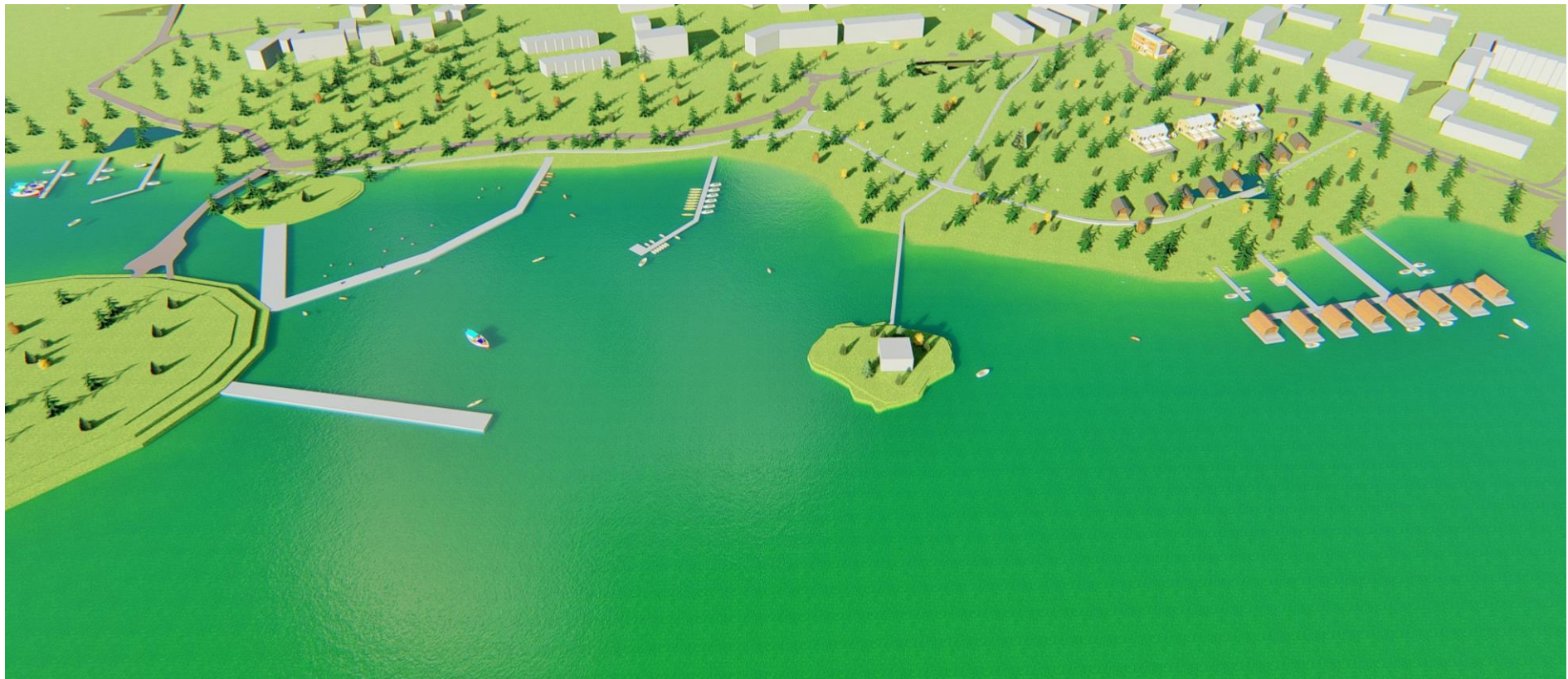


Figure 48: General 3D visualisation of the proposed development of the site

Source: personal elaboration

PROPOSED TIMELINE AND MARKETING APPROACH

As approximately half of the population are young adults who are either working professionals or studying; and 35 percent of people are old age people, keeping in view the demographics of Heinola and to keep the city lively, we have also proposed the idea of co-working space and allotted some space for the companies' offices. The big companies' or industries' can only have their sub offices or headquarters in Heinola and not the production houses as not to destroy the beauty of Heinola by producing carbon emissions and pollution. To achieve our development objectives, we have divided our development plan into three stages which are short term goals, medium term goals and long-term goals (Figure 49).

Part of development such as multipurpose community space, moving of the boat decks, recreation with lake, soccer field, employment opportunities and buildings for commercial activities will be facilitated by the money from the council. The rest of the development such as cafes, boat houses, parks and pathways, wood cabins, co-working space and town houses, will be facilitated by the money generated from private investments.

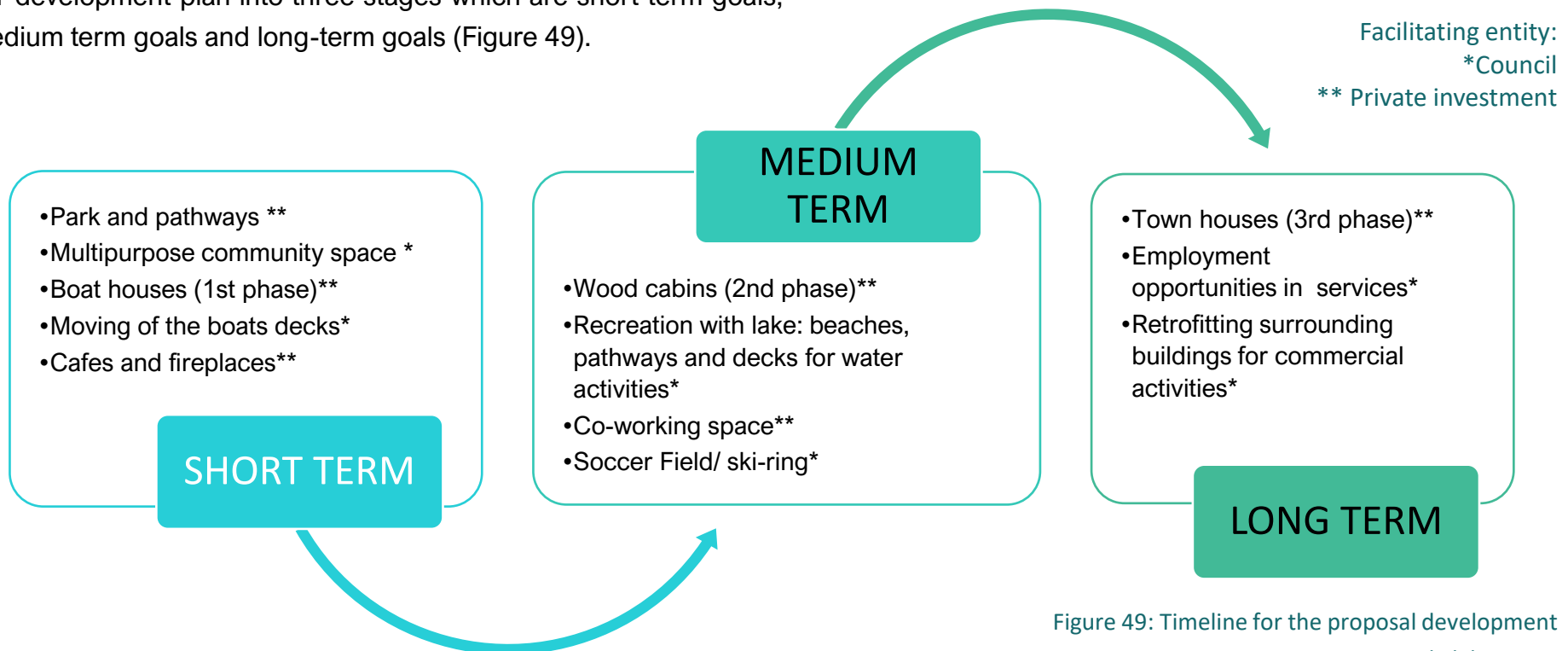


Figure 49: Timeline for the proposal development
Source: personal elaboration

Merely the unique development strategies of Niemelä region and proposed plans are not enough to make the area a tourist destination. Marketing plays an important role, there are various marketing strategies that can be opted to attract tourists:

- Hiring Youtubers and Travel bloggers: that is one of the strategies that Pakistan has used to promote their tourism. It was very successful as it increased the tourism in Pakistan to great extent and Pakistan was ranked as best tourist country in 2020.
- Incentives for film shooting in Niemelä: Destinations shown in movies impact people from all over the world and it creates desire in people to visit the place. One of the successful examples is the way Bollywood movies do the marketing of Switzerland and London in their movies. That's why more than half of the tourists in these countries are from South Asia.
- Small Billboards at Helsinki, Tampere, Lappeenranta Airports and Train Stations which are the best places to catch the attention of tourists.
- Marketing through social media channels like Facebook, Instagram and others.

In a nutshell, Finland is welcoming lots of immigrants and refugees; and immigrants always prefer to live in the bigger cities like Helsinki, Turku, Tampere, Oulu etc., reason being that there are more earning opportunities in bigger cities. Development of Niemela region will not only attract tourists but also provide culture and food tourism opportunities to immigrants to earn their livelihood.

Moreover, Co working space and companies' offices will not only create job opportunities for people of Heinola but it will also attract people from other parts of Finland to settle in Heinola to find work, and to live near Niemelä which will turn into a delightful place (Figure 49)



Figure 50: 3D Visualization of the proposed development
Source: personal elaboration

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As a team we decided to get advantages of each other's expertise. All together we generated the proposal and the timetable for reaching the proposal. We organized the work using Microsoft Team, where we put all the information we found, we worked in shared files of power point and word, used RefWords to make the citations and all the meetings of the group were done using this platform (1 or 2 meetings per week). We all did the writing of the report, and a more detailed description of activities by each team member of the group (group 3) is given below:



GROUP CONTRIBUTIONS

- Muhammad Abdullah: he wrote the Introduction, the Marketing strategy and viability study for the development proposal. He also put background studies and ideas for the master plan. He was the one responsible for the peaching ideas.
- Natasha Picone (Team Leader): she made the personal elaborated maps, and she wrote particularly the Literature Review, the Park and Recreational Site. She put ideas about the shoreline integration, elevated and floating pathways, illumination of pathways and integration with educational signs.
- Navoda Rathnayake: she wrote the SWOT analysis, the description of all the buildings and the sustainable approach for the project. She put ideas about integrating the buildings and recreational facilities with the landscape for the masterplan. She also made the 3D visualisation of all the plan and the layout of the report
- Sisko Jokinen: she wrote the Site analysis, parts of the introduction, the benchmarking Loviisa and the information about participatory planning. She also made the site analysis map and the background material. Her insight view as urban planning and the Finland context was key for the work and proposal.