

APARTMENT BUILDING

EXAMPLE FLOOR SECTION

TOWNHOUSE I

1ST FLOOR SECTION
2ND FLOOR 3RD FLOOR

TOWNHOUSE II

1ST FLOOR 2ND FLOOR SECTION

DETACHED HOUSE

SECTION 1ST FLOOR 2ND FLOOR

ELEVATION 1:250 BRICKS ELEVATION 1:250 WOOD ELEVATION 1:250 WOOD ELEVATION 1:250 WOOD

- 4-5 ROOMS
- THREE ROOMS
- TWO ROOMS
- STUDIO

- Planters on balconies
- Hybrid systems combining renewable energy sources
- Recycled bricks on facades
- Efficient thermal properties of the massive brick structure
- Terraces between masses to protect from the arctic weather
- Solar panels on south-facing roofs
- Eaves protect from excess sunlight and extreme weather
- Light colored facades to prevent overheating
- Customizable housing
- Adjustable sunshade walls on balconies and in the windows
- Wooden structures and facades
- Varying plant species at different heights; green roofs, green walls and green terraces
- Bird-conscious architectural decisions: UV patterned glass, nesting places on green roofs
- Energy efficient windows

SUSTAINABLE HOUSING SOLUTIONS

In order to maximize sea views and provide a connection to the waterfront, taller buildings were intentionally placed inland, with the height of the apartments gradually decreasing as they approach the shore; likewise, the number of trees in the area coincidentally decrease in an identical manner. This intentional house placement ensures that as many inhabitants as possible can enjoy the sea views, enhancing a sense of tranquility, equal accessibility and connection to nature. In the first phase of the implementation four apartment blocks and four townhouses will be built, along with the central esplanade. The second phase will include the building of the rest of the apartment buildings and the central townhouses towards the beach. The third phase will include the townhouses facing the shore.

To cater to diverse needs, a vision of a mixture of housing types, including apartments and townhouses, are implemented. All residential units are designed to be energy-efficient, incorporating sustainable building materials, green roofs, and solar photovoltaic glass. The integration of solar panels and rainwater harvesting systems further reduces the ecological impact while providing residents with renewable energy sources provided directly from EnergyVaasa. Through careful consideration of building orientation and design, optimal energy performance and indoor lighting and comfort for residents throughout the year are ensured.

The choice to construct apartment blocks (4-10 floors) and townhouses (2-3 floors) primarily using wood showcases the project's commitment to sustainable materials and construction practices. Wood is a renewable, low-energy resource, producing a small carbon footprint. In addition, brick is used in the construction of the apartment buildings; through it, Paapuuri seamlessly merges into Vaasa's architectural aesthetics and history. The inclusion of solar panels further enhances the ecological performance of these buildings, utilizing renewable energy and reducing reliance on non-renewable sources. To keep the harmony of the island, the townhouses towards the shore will remain small scale in the likeness of the older shore buildings encircling Vaskiluoto, thus creating a unified spirit.

EMBRACING THE CITY OF TOMORROW

Inspired by the principles of ecological transition and efficiency, Paapuuri's incorporated waste management system includes an underground pipe network that transports garbage to a centralized location near a larger waste handling center. This system uses vacuum power to streamline waste management and minimize the ecological impact of traditional waste collection methods. By eliminating the need for visible garbage bins and collection trucks, the aim is to create a clean and visually appealing environment. This approach also reduces noise pollution and improves the overall aesthetics of the neighbourhood. This creates an environmentally conscious community that actively reduces its carbon footprint and encourages residents to adopt responsible practices.

In the quest to provide diverse and sustainable transportation options for the residents of Vaskiluoto, a visually pleasing and efficient cable car network to the area is considered. This system not only serves as a means of transportation but also adds to the allure of the neighbourhood, creating an iconic landmark and tourist attraction. To uphold the commitment to sustainability, the cable cars would operate exclusively on electric power, drawing energy from EnergyVaasa. In addition to its functional purpose, the cable car network would serve as a visual symbol of the neighbourhood's commitment to sustainability and innovation. The modern design of the cable cars would capture the attention of residents and visitors alike. Moreover, the cable cars would provide panoramic views of the surrounding landscape, including the scenic beauty of Merenkurkku islands, an UNESCO world heritage site, and the neighbourhood itself, offering an unparalleled experience for passengers. To ensure safety and operational efficiency, the impact of wind on the cable car system will be considered. As wind can affect the stability of cable car operations, for safety measures pausing the system when wind speeds exceed 18m/s will be implemented.

For the future expansion of Vaskiluoto, Niemeläntie-adjacent plots shall be used for townhouse building, always with the same principles as Paapuuri was built on.



VIEWS AND BUILDING HEIGHTS



BUILDING FUNCTIONS

