

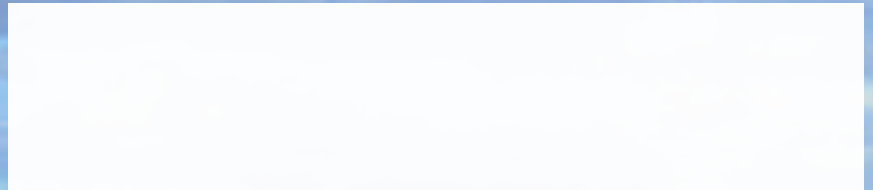
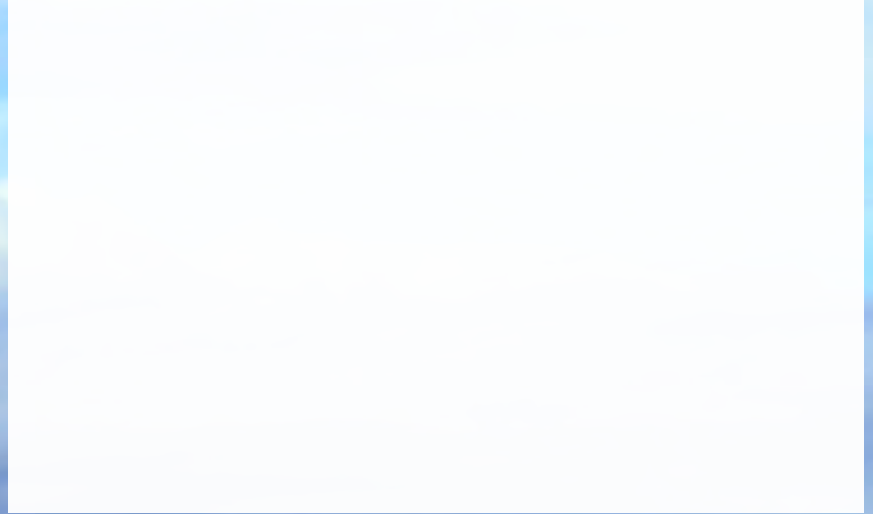
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DIPLOMARBEIT

PESKERA Seafront
REVITALISATION OF AN INDUSTRIAL SITE IN POREC

ausgeführt zum Zwecke der Erlangung des
akademischen Grades
eines Diplom-Ingenieurs / Diplom-Ingenieurin
unter der Leitung

ao.Univ.Prof.Dr.techn.Dipl.Ing. Helmut Schramm

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ABSTRACT

Revitalisation of industrial site Peskera is a comprehensive project that will address both residential needs and public facilities.

The idea is a response to the current issue of the outflow of urban population from Porec. Site currently serves as a waste disposal and a warehouse.

Attractive location, good infrastructure and natural potential of this plot yield high potential that is not being properly recognised. Limited resources and needs of the target group, young professionals and families, are implemented in the concept. They manifest through low cost construction, reuse of materials found on the site and compact building design. Natural potential of the site generates fertile ground for building environmentally friendly homes.

Social dimension of the project is entrenched in the design of public surfaces. Area designated for current beneficiaries, water sport clubs and youth association, is included in renovation plan. Peskera complex also features a seafront promenade, playgrounds and green surface for recreational activities.

Local people invest their time and resources to revive old industrial site Peskera. This project is designed with these people in mind and in hope that it will present significant contribution to their efforts.

ABSTRACT

Das Projekt Peskera beschäftigt sich mit der Frage der Abwanderung städtischer Population. Einwohner des urbanen Raumes ersetzen ihre städtische Heimat mit der Ruralen. Als Resultat ist man mit einem leeren historischen Zentrum konfrontiert, das über den Großteil des Jahres ungenutzt bleibt und somit einen bedeutsamen Einfluss auf den Charakter der Stadt ausübt.

Das Vorhaben dieses Projektes beinhaltet die Planung von Wohnraum sowie von öffentlichen Gebäuden. Das geplante Wohnviertel beschäftigt sich mit den folgenden Benutzergruppen: junge Familien, Berufstätige, und junge Erwachsene. Reduktion von Bedürfnissen und Ressourcen der Benutzergruppe werden im gesamten Projekt thematisiert. Ein „low-cost“ Ansatz wurde angestrebt um ökonomischen aber auch nachhaltigen Bedingungen nachzukommen. Die natürlichen Einflüsse der Gegend ermöglichen es effizienter, hinsichtlich solarer Nutzung und natürlicher Belüftung zu bauen. Materialien, die vor Ort verfügbar sind werden für den Umbau genutzt.

Die öffentlichen Gebäude schaffen Raum für Wassersport-Vereine, Jugendorganisationen und Handwerker. Des Weiteren, werden öffentliche Flächen so gestalten, dass sie Freizeit, soziale Aktivitäten, sowie den aktiven Lebensstil fördern. Durch die analytische Beobachtung der jetzigen Bewohner wurden Ideen zum Beleben der Gegend generiert und entwickelt.

Die Ansässige Bevölkerung investiert ihre Zeit und Ressourcen um zum Wohl der Gemeinde beizutragen. Trotz eingeschränkter Rechte und finanzieller Mittel ist ein starker Wille und Einsatz um die Dynamik und Lebendigkeit in den urbanen Raum zurückzubringen, erkennbar. Dieses Projekt wurde mit einem starken Bezug auf diese Benutzergruppe gestaltet und trägt die Hoffnung, dass es zu ihren Bemühungen beiträgt.

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PREFACE

Project Peskera addresses the issue of outflow of urban population. Urban citizens substituted town for rural habitat. There are many factors that have shaped this occurrence. Main culprit is tourism. Even though tourism has brought wealth and has stimulated development of the entire region, there are also negative side effects. Real estate is primarily used for touristic purposes. Existing buildings are refurbished and the new ones are built for the needs of foreigners. This trend is even more present in town centre. The result is an empty historic core for the greatest part of the year that affects town character.

Huge potential is found in an old industrial zone located closely to the town centre. Despite its excellent location and natural environment beauty, the site is used for unsuitable services, such as disposal site for electronic waste and warehouse. Existing structures and infrastructure are in poor condition and call for revitalisation of the entire zone.

Proposal of this project encompasses both residential plan and public facilities. Residential area targets young families and professionals and people who are building their lives. Low requirements and resources of the targeted group permeate through the entire project.

To ensure broad user base, buildings are customised to various needs of their future residents. There are three main housing types: social housing that occupies the greatest area, semi-detached houses and urban row houses. They differ in size, comfort and their function.

Low cost approach was used to build sustainably and economically. Natural potential of the site enables better building performance, i.e. improved heat and sunlight absorption, natural ventilation, etc. Materials that are found on the site are reused in reconstruction.

Public facilities provide space for water sport clubs, youth associations and craftsmen. Furthermore, public surface is designed for recreational and social activities to promote active lifestyle.

Observing current occupants in their daily activities has generated the idea of reviving the entire zone. Local people invest their time and resources to contribute to the welfare of the community. Despite limited legal rights and budget, they show strong will and commitment to return dynamics and vibrant spirit to the town.

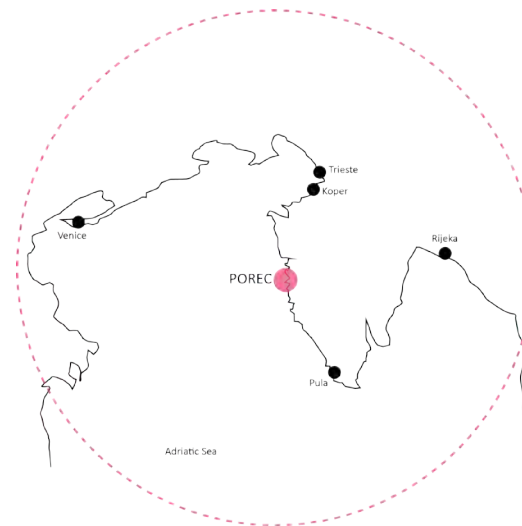


1.1 CURRENT TREND

Porec is a town of culture, tourism, sport and entertainment. Located in the heart of west Istrian coast, the largest Croatian peninsula, it has developed into an important tourist centre thanks to its geographical location. Dominant trends in Europe, both positive and negative, affect the local setting. Intensive population mix during summer and unevenness of work rhythm and lifestyles in winter and summer are main reason for strong people migration.

Trend that has been noticed in the past years and has risen concerns is the relocation of local population towards the periphery. An important factor is tourism. Old buildings are being refurbished to meet the standards of rental apartments for touristic purposes. Furthermore, newly built houses are regularly composed of several smaller apartments intended for sale or rent to foreign customers.

People tend to move elsewhere because it is the only feasible option. Over 200 settlements in Porec area, from several houses to whole villages, profit from such trend. Family homes are built distant from the urban area where land prices are sufficiently low to allow



'non-profit' building. Car has become a necessity to reach town to go to work, take children to school and do errands. If one takes into account that touristic objects stand empty during the greatest part of the year, it becomes obvious that such allocation is not efficient. It causes traffic jams (especially during rush hours), deteriorates fuel emission issue, increas-



es the need for parking spots in the urban area and generates additional costs.

Pleasant climate, lush nature, good regional transport cohesion and economic development make Porec a desirable place to live. Yet, over the last decade population counts negative numbers i.e. people are moving outside the urban area.

Coastal belt is converting into a large tourist facility that is in its full potential only when occupied by temporary residents. Such trend does not support permanent populating within the closer urban area.

The problem is not lack of space or overpopulation, but the lack of opportunities for family homes. Investments are oriented towards tourism. High prices of both land and real estate in town centre call for a solution that combines attractive urban location with a reasonable cost. Peskera is an area that incorporates both criteria. Its proximity to the town centre (only about 200 m) makes it very attractive for potential future residents.

Project is designed to make the most of the given plot and to take economical factors into account. Dense construction demands less space, yet provides sufficient living area for healthy and active lifestyle. Furthermore, it implements progressive ideas of social welfare.

Thanks to tourism Porec managed to develop into a regional centre. However, for sustainable development of the area, the society should focus more on improving life quality of regular citizens. Whilst this project does not solve the issue of dependability of local community on one branch of economic activity, it does offer a solution on how to retain dynamic lifestyle when the visitors are gone. By offering future residents and locals a place where they socialise, practice sports or work, Porec will regain its vibrant spirit.

- ◀ Summer sport activities
- ◀ Geographic location of the site
- ◀ Town Porec with its residential settlements
- ▶ Historic town of Porec

- HISTORIC CORE OF THE TOWN POREC
- ANCIENT TOWN PORT
- DEVELOPMENT OUTSIDE THE TOWN CORE IN 19TH - 20TH CENTURIES
- A ST. ELEUTERIJ'S CHURCH
B PALESTRA



To faithfully demonstrate typology of rural settlements, common for entire region, two examples are drawn from central Istria.

One of them illustrates a typical settlement found in Istria; few houses are spread around relatively large geographical area with no public facilities. Village requires infrastructure that could easily support an entire neighbourhood in the urban area.

Other example shows a more efficient use of resources. Village forms a cohesive whole and offers essential services to its residents. Both settlements cannot function independently. They are part of the wider suburb of town Pazin, main urban centre in inner Istria.





- ▲ Numerous settlements around Porec together with number of their inhabitants
- ◀ One road is built for the purpose of connecting single house to the main road

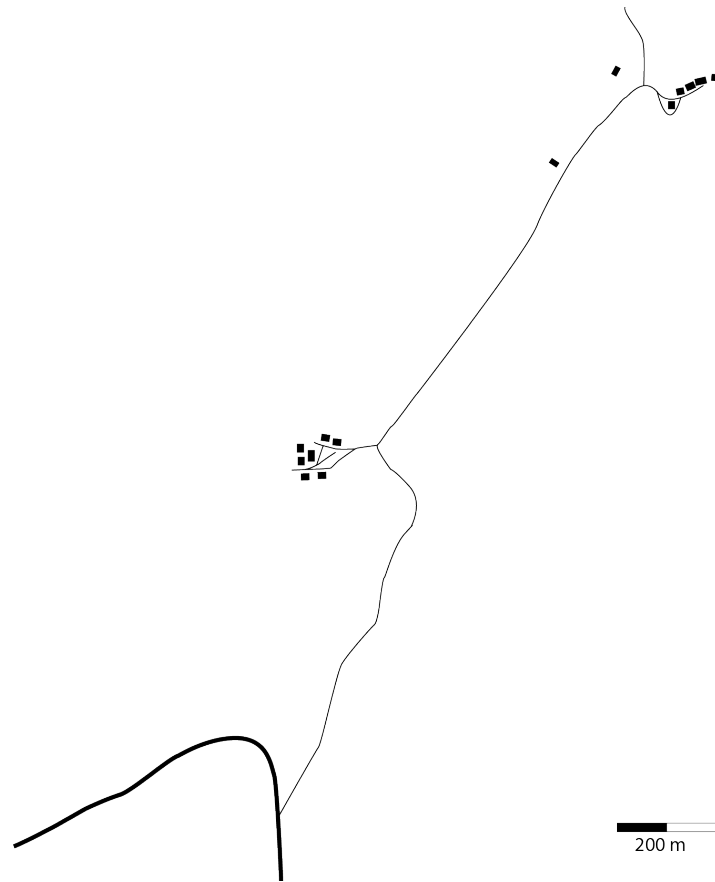
CIPRI, Central Istria

Cipri, a 400 years old village in central Istria, sets an example of 'random' settlements outside the infra-structural centre.

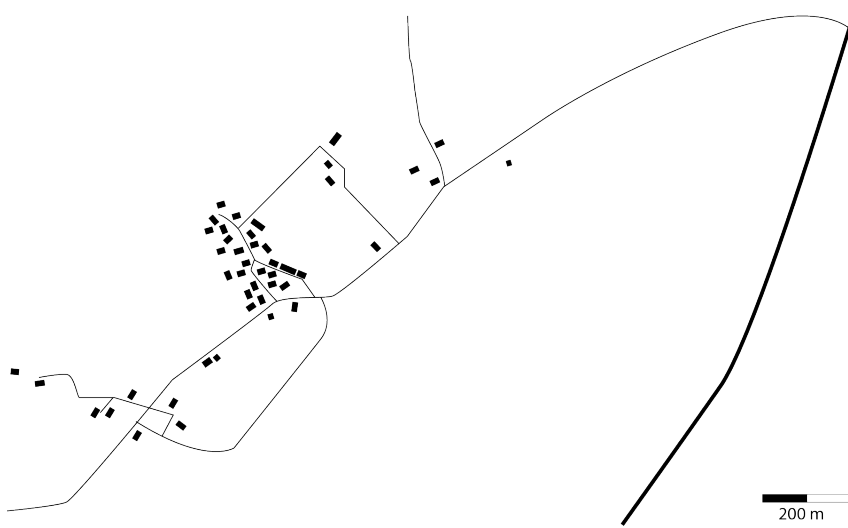
Inhabitants work, go to school and buy groceries in the nearest town Pazin, which is 8 km away. It has 18 inhabitants, from whom: 3 persons are above 70 years old, 9 persons range between 35 and 50 years and 6 under 16. Younger generations opted for building a house near to their family instead of moving away from their nest.

The village benefits from arable land, spacious green space, ability to produce and eat healthy food, large amount of privacy and fresh air. All inhabitants know each other, but there is no local centre where they interact.

The main problem in village is transport. Houses are relatively distant from one another as well as from the main road. They are reachable by vehicles or a very long walk. Landscape is composed of agricultural land with no sidewalk or street lights on the road.



▲ Structure of the village Cipri
▶ Structure of the village Heki

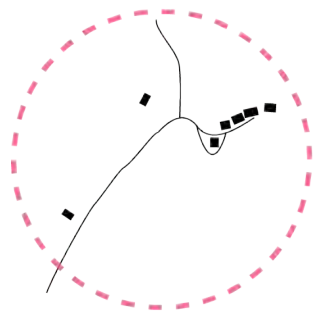


The village occupies large area for such small number of residents. Building infrastructure for such settlement is very inefficient. Furthermore, it takes time for newer installations to reach the village.

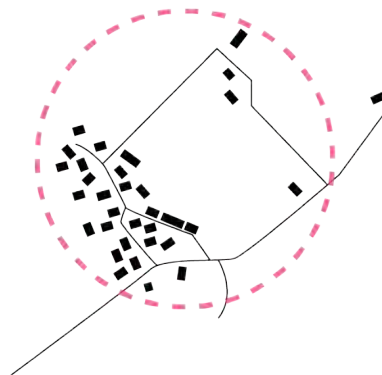
HEKI, Central Istria

In a nearby area, southwest of Pazin, there is a village Heki with 564 inhabitants and 164 households. Village follows a positive population growth for the last 30 years. Over the past decade the village has developed into a vibrant small community with its cultural and sports events that attract visitors from the area.

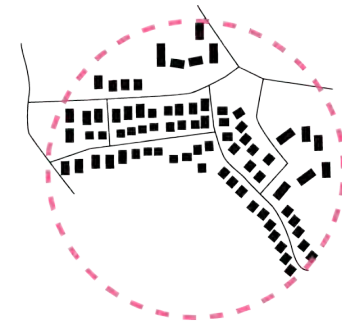
Unanimous inhabitants invest their time and effort to improve living quality there. In the village, there is a small library, a few sightseeing points and even accommodation possibilities for incoming visitors. It acts as a dynamic community on social level, even though work and services are centred in Pazin.



CIPRI



HEKI



POREC

Heki is one rare example in Istria where such settlement managed to develop into a functioning community. Most of the others, such as Cipri, offer basic infrastructure and no services.

Primary problem does not lie in creation of new settlements. What causes concerns is the emergence of many new settlements that often have no urban plan or wider social purpose.

The growth of such unplanned settlements is not a cost-efficient way to deal with the issue of real estates prices in the urban area. Same infrastructure for one village, Cipri or Heki, can support an entire planned neighbourhood in an urban zone.

▲ Comparison of rural and urban settlements within the same scope
 ► Central Porec from the air



NEXT

1.2 PRIMARY OBJECTIVE

REJUVENATE A LOCAL, DISUSED SPACE TO STIMULATE ACTIVE LIFESTYLE

Several key factors make this plot one of untapped potentials for both public and private interest. With its good infrastructure, this area will become a link between the urban central zone and a more peaceful green zone. Wasteful usage of existing objects and high potential of this site offer an opportunity for new reinterpretation of an old industrial settlement. Convenient geographical orientation and immediate proximity to the town centre, sea and beach make this site even more valuable.

In the spirit of Mediterranean culture, locals spend a lot of their free time outdoors; simply walking around the streets or looking outside the window, spending time in the garden or on the playground, talking to a neighbour on the porch or on a balcony. Such intermediate spaces are places for interaction and socialising. Several common playgrounds are designed for these occasions.

The whole zone is green and car-free. Living space is not large, but Comfortable. Users are active and spend lots of their time outside their homes. In winter, the entire coast becomes calm, both economic and

social wise. That happens mostly because the town stays empty and the population is spread throughout its suburbs. Fortunately, Mediterranean climate and favourable weather conditions enable outdoor recreational activities from early spring to the late autumn.

Through the addition of a promenade and conversion of existing buildings, Peskera will represent a natural extension of the old town. At the same time it will create surface for social interaction, temporary structures and events.

- GREEN SPACE
- PEDESTRIANS
- VEHICLES



LONG TERM SOLUTION FOR SMARTER TOWN GROWTH

Compact, multi-centred cities are the only environmentally sustainable form of urban development for future generations. They are a rational and economical way of creating human settlements that offer a high quality of life. They need to combine living and work, and encourage the rich and poor, the young and old to mix freely. Pedestrians, bicycles and public transport take priority over the car, and environmental responsibility is the driving force behind the planning of such settlements.

R.Rogers + Architects

Drop of urban population, and at the same time growth of rural population, has created commuting. People reside in one place and run their lives in another. There is a need for cohesion of these life aspects. They depend on car to get to work, to go to school or to socialise. Public transportation in the region does not provide efficient solution.

Managing urban growth will ultimately lower commuting. Compact towns, followed by plan and good

design, will keep the locals and attract people from wider area. In their form, they promote social interests and needs and embody environmental consciousness.

The positive effects of denser population reflect in local economy, transport, social interaction and other fields. Further, building on previously developed land preserves woods and green land in wider area.

Environmentally friendly approach will promote car-free zones, thereby allowing more free surface for pedestrians, cyclists and scooters.

► *Natural predispositions make Porec a desirable place to live*



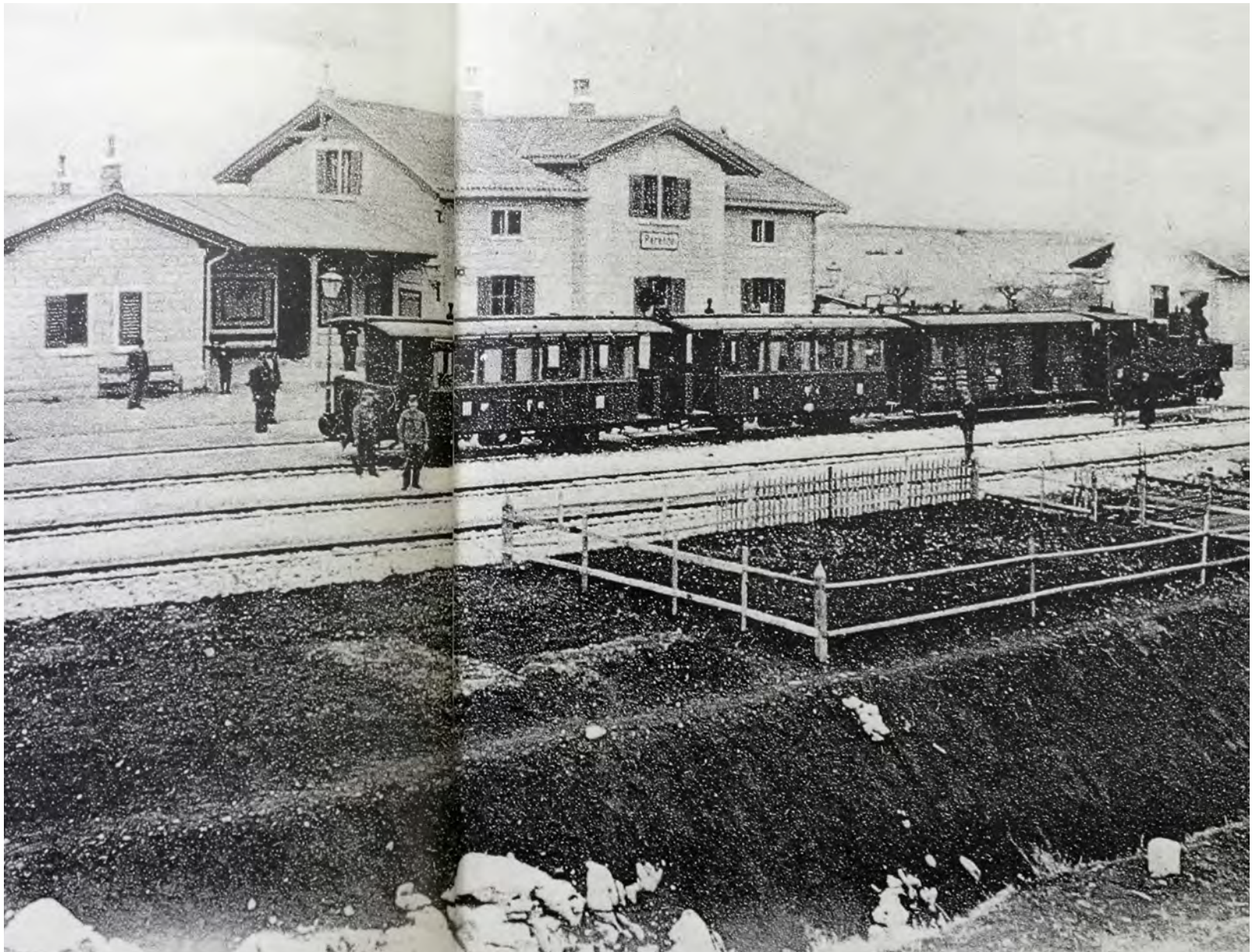
1.3 SITE OVERVIEW

PESKERA IN THE PAST

Peskera is an undeveloped site situated to the north of Porec, on the very edge of the old town's medieval walls and tower. Building plot is the newer part of the town built outside the walls. Inhabitants' dispersal, migration to the periphery and suburbs, along with intensive development of tourism is a result of the condition Peskera is now in - a never completed tract that links and defines the townscape of northern Porec. Primary use and form of existing buildings tell us about unplanned approach in building outside the town centre.

The former factory 'Skoljka' (Clam) for fish and sea products processing, which hasn't been in use for over several decades, still remains. In a neighbouring area, the ownership of many buildings hasn't been resolved. As a result Peskera suffered from lack of investment and subsequent development over the years. Despite the bad condition of these structures, most are still used by children and youth associations due to the lack of usable space for social facilities in the main town.





PARENZANA

'La Parenzana' was a narrow gauge railway, which linked Porec with Trieste (IT). It was finished in 1902 under Austrian-Hungarian Empire rule, after the local population of 18 communities decided to improve the economic condition of its region. The length of the line was 123 km with trains reaching top speeds of 31 km/h. The journey to Trieste took 5.5 to 7 hours (today approx. 1.5 h).

With a total of 35 stations dotted along the line, the railway was fundamental in the local transportation of agricultural products throughout north-western Istria (oil, fruits, vegetables, vine, meat, milk, tools, stones...).

Each arrival of the train was a significant social event for the local population. For the grand opening of the first section in 1902, everybody were invited and there was already drama involved. At the time, all signs were trilingual (Italian, German and Croatian/ Slovenian), but the Italians were against multilingualism and decided to boycott this historical event. During its 33 years of existence, there were few accidents, due to

strong winds or once in 1917, Russian prisoners fell out of the rails in the curve, together with the locomotive. Its last ride occurred on 31 August 1935, during the Mussolini reign. Italian military dismantled the railway in 1940 in order to build a new one in Ethiopia. The ship that carried the rails and locomotive is reportedly submerged and lies on the bottom of the Mediterranean Sea.

There are lots of impressive buildings, viaducts and tunnels preserved on the route, which is now designed as a recreational trail for cyclists and pedestrians, with notable bike marathons held every year. On its 100th Anniversary in 2002, the initiative for its renewal was launched. All three countries, Croatia, Slovenia and Italy, together with the help from EU, are working together on project for the rehabilitation of the railway Porec – Koper – Trieste, under the name 'Parenzana – the route of health and friendship'.

◀ *Final station of the gauge railway 'Parenzana' in Porec.*



PESKERA TODAY

Presently, the former fish factory complex and buildings in the vicinity are used as repositories for plastic, electronic and paper waste. They also act as a bus garage, a warehouse for hotel and sport clubs equipment (including boats, jet skis and other similar goods). By the seafront there are also head offices and storage of a few local water sport clubs (sailing, kayak, rowing and diving club). The rest of the empty spaces are rented to the local small shop owners at a very low price of approx. 0.15 €/month, and are in use as storages as well.

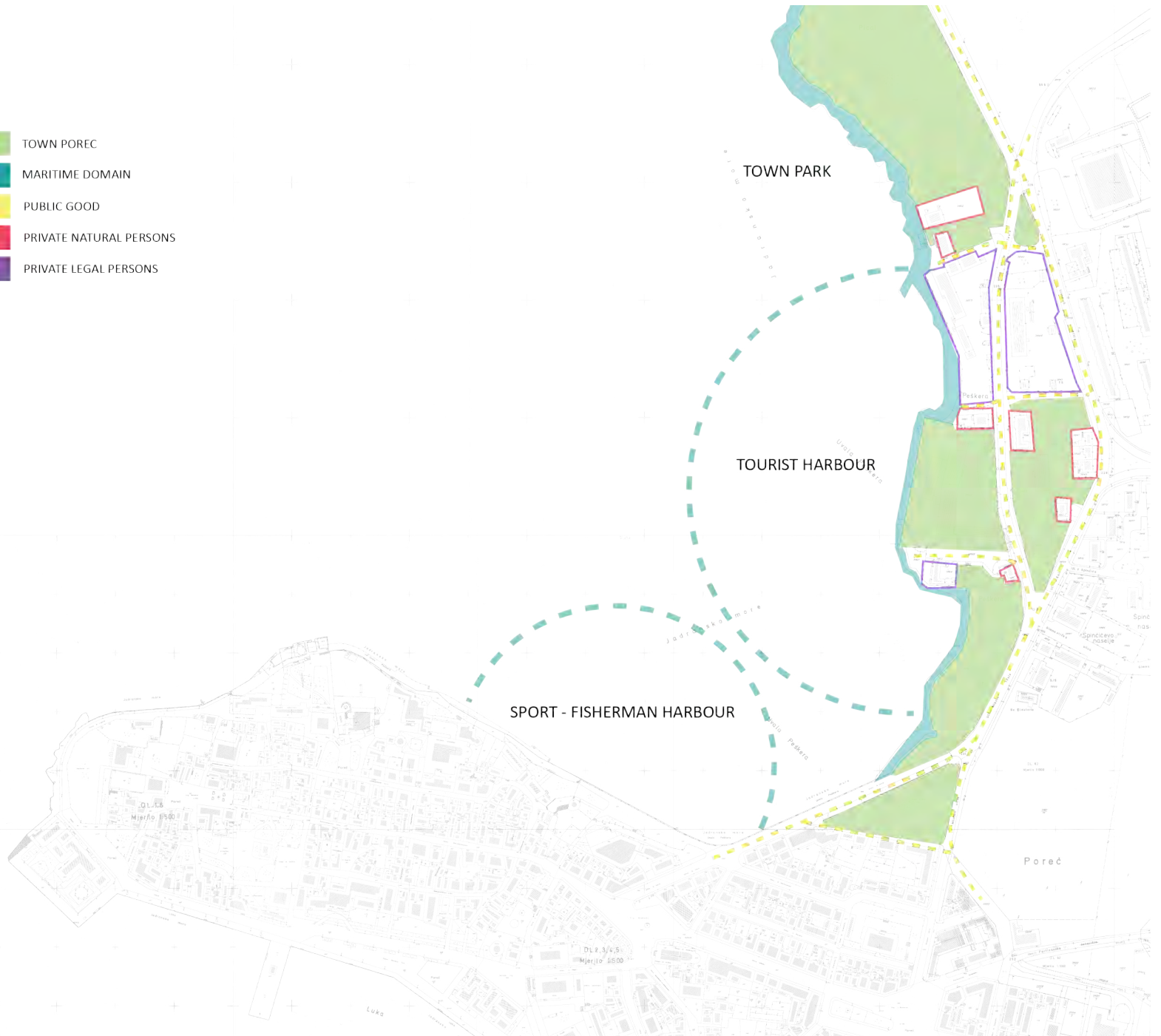
In the northern part of the site, old car-wash garage and other surrounding objects serve as a meeting point of youth associations. Occasional concerts and other small cultural events revive the abandoned area.

- ◀ *The view from Peskera onto the sea and the old town in Porec*
- ▶ *Existing structure on the site*
- ▶ *Current ownership situation*
- ▶ *Disposal site for old paper, plastic and electronic waste*
- ▶ *Youth association's courtyard*

- GREEN SPACE
- COASTLINE
- RESIDENTIAL
- COMMERCIAL
- A CARWASH, ABANDONED
- B BUS PARKING
- C CATERING, COMMERCE, ABANDONED
- D WAREHOUSE
- E CATERING
- F SPORT ASSOCIATIONS, OFFICES
- PEDESTRIANS
- VEHICLES



- TOWN POREC
- MARITIME DOMAIN
- PUBLIC GOOD
- PRIVATE NATURAL PERSONS
- PRIVATE LEGAL PERSONS









2.1 MAIN FOCUS POINTS

The site is spread over about 5.5 ha and surrounded by urban environment on the east and the sea on the west side. Site is divided into two parts by a one-way road with slow traffic. Coastline will remain its public function and serve as a hub for a few recreational and professional sport clubs and one youth club with support (social) facilities. These activities are held in the existing buildings.

The inner part will have primarily residential function. Furthermore, buildings within the residential area behave as first homes for young families and professionals and are densely distributed in such way so as to allow children's playground, table tennis tables and volleyball court. All recreational facilities are open to general public and are illuminated at night.

Central point of the residential area is a small square with Parenzana building in the centre, acting as a meeting place for local social initiative for healthy and sustainable living.

Paths passing through residential zone lead to the seafront. There is higher concentration of public urban surface that stretches over the entire lengths of the site. Excluding the two small one-way roads, all the other trails are intended for pedestrians. The distances on the site are rather short, within only a few minutes walking.

Surrounding vegetation is seasonal and formed to provide shade and protection from strong sun during the warm part of the year. During winter months, however, it allows sun rays to reach deep in the dwellings as well as the public surface and playgrounds.

- ◀ *View from pontoon in front of the local rowing club*
- ▶ *Site overview with retained and new structure*

- GREEN SPACE
- EXISTING BUILDINGS
- NEW BUILDINGS



2.2 URBAN PLANNING

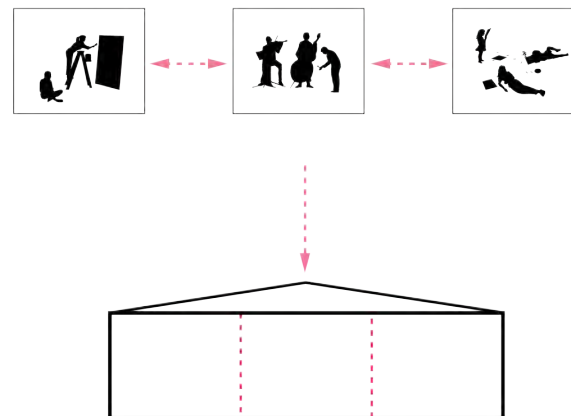
PEDESTRIAN DISTRICT

Proposed project for Peskera combines pedestrian friendly design, green spaces, a mix of public facilities and housing units. All that forms one healthy and vibrant community. Position and orientation of buildings, footpaths and common spaces are creating new vistas: a view to the bay of Porec from many different angles. Some of the existing objects are preserved, thereby contributing to the diversity and appreciation for the area.



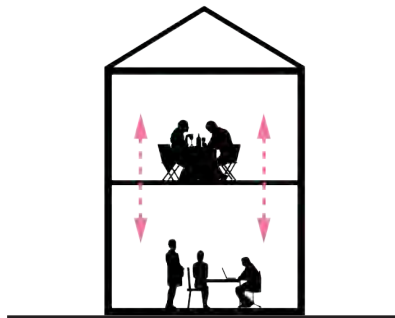
SOCIAL FACILITIES

Complex of buildings for children and youth are separated from sport facilities by a small square with one catering service and wide sitting steps. Space in between could be used as a relaxing or creative corner, or as spectators' spot to watch venues on the water. Interiors of public buildings are kept low key to accommodate various temporary purposes. Individuals (or smaller groups) are able to rent an empty space for their creative expression (such as for music and drama practice or jewellery production).



WORK IN THE NEIGHBOURHOOD

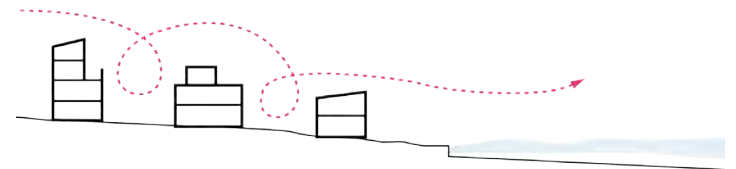
Time is money. There are many reasons why working within the walking distance is preferable; fuel costs, rush hour stress and long search for a parking spot are only a few of them. Less time on the road equals more sleep, more time with kids or more time on a boat. Ground floor rooms have multiple purposes. They serve as a rent-free workspace or a hobby room, or as a potential source of income if rented to the third party. They are conveniently facing active pedestrian zone.



HOUSING

Ten low-rise housing complexes gradually descent towards the sea. They are located at a comfortable distance so the spaces in between take in a lot of sunlight. First row of densely built residential buildings oriented to the west act as an extension to surrounding residential neighbourhoods. They are the tallest buildings on the site, containing up to 3 storeys. The view from the roof gardens expands to the horizon of the bay of Porec.

Central housing blocks are most comfortable ones. They are oriented north-south and have a garden on the more private side. The last housing blocks, separated by a one-way traffic road, are designed as one-storey urban row houses oriented towards the public facilities and the sea. The orientation among buildings prevents direct views from one home to another. Intersecting footpaths in between lead to playgrounds and public zone by the water.



2.3 LANDSCAPE

PROMENADE

Pedestrian flow by the sea in new Peskera is a continuation of the existing 'lungo mare'. This whole defines a big public surface broken into smaller fragments. Recreational environment, such as skatepark or exercising planes, and green spaces, including large benches followed by row of trees, stretch along the seaside.

Smaller paths, intersecting residential buildings on the east and on the south, lead to the main pedestrian path. This promenade connects the town centre with tourist facilities and beach on the north of the town. Wide public footpath allows pedestrians and cyclists enough space for comfortable passage.

GREEN SPACE

Green zone that joints the site with inner town splits into private and public green area and woods. Its existing function as a surface for events and temporary structures is now better organised. Row of trees closer to the road serves as a buffer and as a shaded pathway for regular passengers coming from or going to the town centre. The passenger retains the sea view from all the angles.

Private green land is designed for individual gardens. They are either placed in front of the dwelling or at the rooftop as a compensation for the missing piece of land on the ground.

Woods remain intact, except for the addition of vegetation on the southern edge. Trees are planted along walking paths to protect against strong sun during summers.

- PUBLIC GREEN SPACES
- PRIVATE GREEN SPACES
- VEGETATION
- A VOLLEYBALL
- B KIDS PLAYGROUND
- C TABLE TENNIS
- D SKATEPARK
- E EXERCISING PLATFORM
- F STAGE AREA
- BUILDINGS



URBAN ENVIRONMENT

Among many of the facilities offered within the complex, those planned for recreational and social activities are of a great importance. Path that follows the coastline is suitable for those who enjoy long walks, jogging or cycling. The rest of the surface is intended for public use as well.

Situated very closely to the promenade is a small skatepark - concrete area where in-line skaters, skateboarders and freestyle bmx riders can improve their skills. It is thoughtfully situated by the water, so the noise does not reach the residential area. Next to the skatepark, there is a large wooden terrace well suited for outdoor workout. Its proximity to the fitness centre makes it a very desirable place to perform individual as well as group workouts, such as Pilates or Zumba.

This area is illuminated for evening workout sessions. Promenade is illuminated as well to attract visitors and offer more security even when the sun goes down. Zones with increased activity have separate special switch that is regulated manually.

In the near distance from the skatepark is a snack bar with adjacent terrace. In addition, there are large steps where people sit and enjoy the seaside view.

Seafront tends to be busy. There are boats sailing in and out of the port or spontaneous competitions among members of the local rowing club and regattas.

In front of the boat hall, there is a large surface suitable for temporary storage of sail boats, motorboats and other boats. This area can also serve as a temporary stand for audience in the event of swimming marathon or regatta.

Second lounge bar is situated on the other side of the promenade, right next to the green surface that is attached to the platform planned for local festivities and musical concerts.

In the residential area, in between the housing objects, there are several playgrounds suited for

► *Volleyball playground in front of the social housing building*

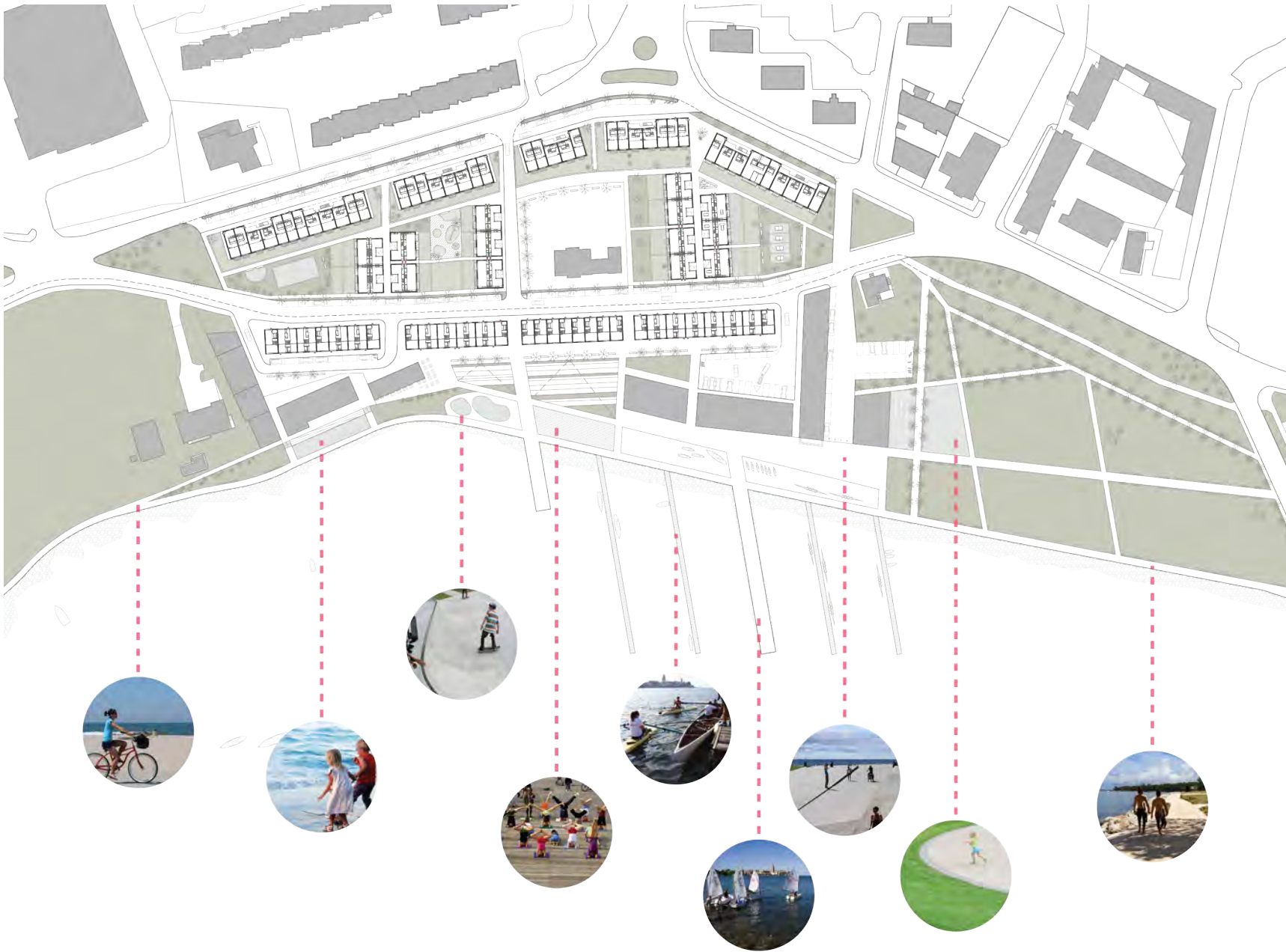
children and adults. Volleyball court and table tennis area enjoy sun protection thanks to trees that separate the recreational area from the street. Parenzana square is a central point that takes up a large area that occasionally transforms into summer outdoors cinema or into a venue for various cultural events.

Public surfaces are designed for outdoor activities. Pleasant sea breeze and clean environment are only another reasons to perform daily exercise or stay outside. Natural environment benefits both mental and physical health in many ways.





- ▲ Public zone by the sea
- ▲ View from the rooftop garden (social housing building)
- Some of possible activities in the public area



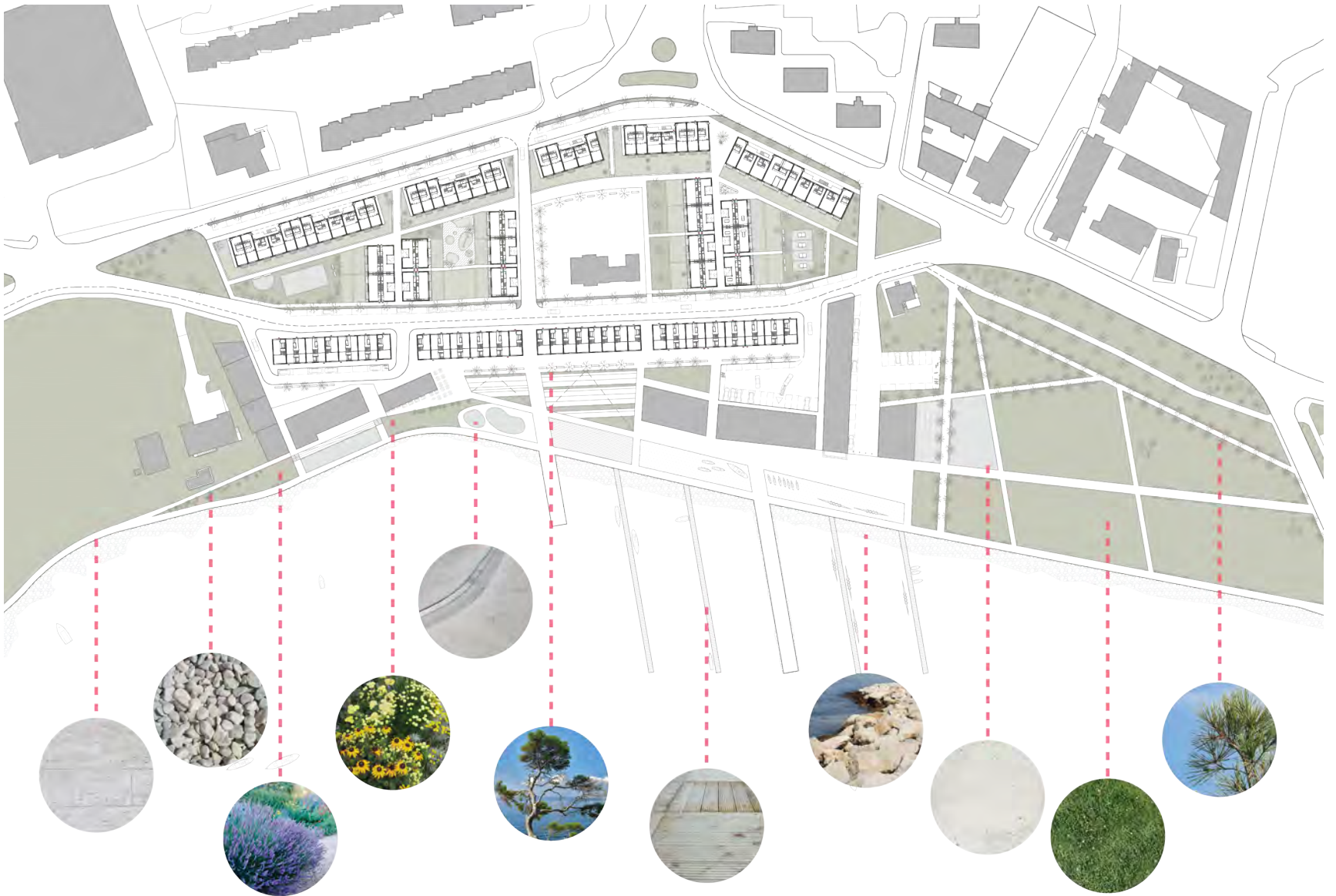
MATERIALS

When it comes to materials, bright colours dominate entire area. Combination of stone, wood and concrete fit together with the off-white and light grey sea stones. Not only it reflects the heat in summer, but it also merges with more recent urban environment in the town. Wood is present on the surfaces that are used for sitting or exercising. It offers a pleasant experience at different times of the year.

One of the inspirational motives, rocky shore, will remain and with its beauty and power will render its audience speechless.

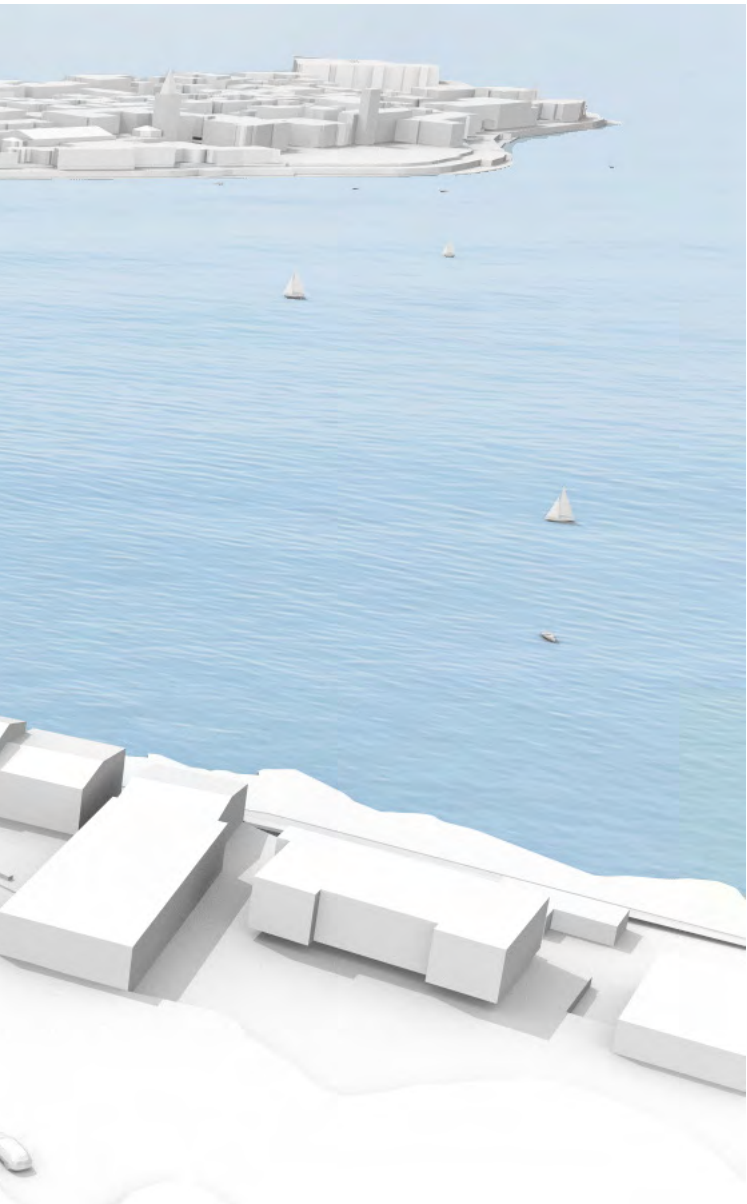
Mediterranean spirit is embodied in surrounding vegetation. Low growing shrubs and typical plants decorate seafront and make the scenery even more idyllic. Lavender scent and vivid wild-flower colours complete the image of Mediterranean oasis.





◀ Rocky shore in Porec
 ◀ Colourful wild vegetation
 ▲ Mediterranean vegetation and bright coloured materials characterise the new Peskera seafront





2.4 HOUSING

USERS

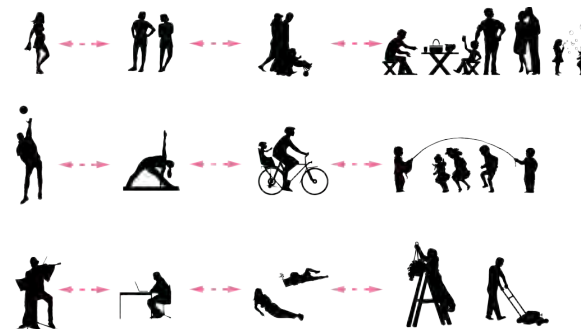
Project is primarily targeting young families and professionals. Most of them have spent their early adulthood away from home pursuing their careers or education. Upon their return to their hometown they have issue becoming independent due to lack of housing opportunities. 'Pesquera seafront' would fill the housing demand gap and provide affordable accommodation for young people in the process of building their lives.

Central location and proximity to the sea make site a very desirable buy option for touristic purposes. However, when it comes to long-term sustainable local community development and the urban population growth, the touristic option isn't the right solution. Socially inclined residential area that is seeking to tackle issues of the future generations would represent a big step towards creating a better future for society.

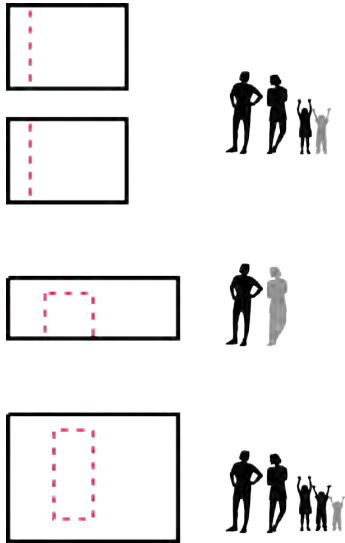
Since the target group, returning young professionals and families, has fewer resources it also has lower requirements. Dwellings are designed to address this issue. They are built in economic way; maximising the utility of available space while paying attention to aesthetics.

Furthermore, dwellings are suitable for different potential users; for those who enjoy spending time outdoors, those who prefer working from home and those who want to keep an eye on their kids when they play outside with friends. Parts of the ground floor dwellings are adjusted for persons with reduced mobility. Project is designed to encompass a broad target group.

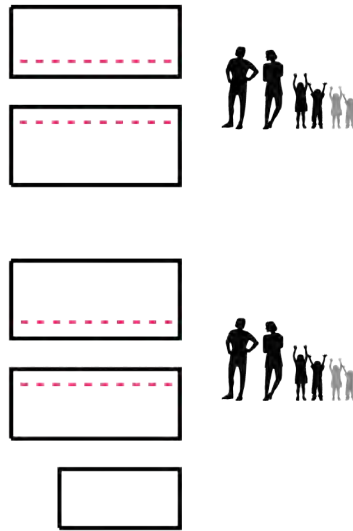
The structure of users will change over time. Nevertheless, long-term potential of the project promises to rejuvenate this local urban area and allow children and families to benefit from the central location and surrounding nature.



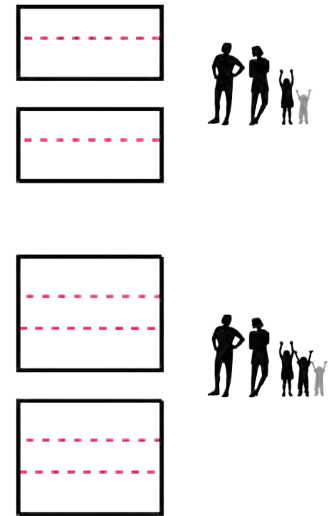
SOCIAL HOUSING



SEMI-DETACHED HOUSES



URBAN ROW HOUSES





MASTERPLAN 1:750





3.1 TYPOLOGY

SOCIAL HOUSING

Social housing complexes are located at the edge of the site and serve as a buffer between outer world and newly built area. Buildings present extension of the dense housing development of surrounding existing neighbourhood.

These houses are the tallest and the densest buildings on the site. Compact homes come in two main types. First type is a maisonette, with a ground floor serving as a common area and upper floor as an intimate space. Second type varies between a studio, suitable for singles or couples, and a more spacious dwelling composed of two smaller units.

Long and narrow dwellings have compact layout. Sanitary core divides flat into two zones: kitchen that is facing street and living/sleeping area that overlooks pedestrian neighbourhood. Merger of two such adjacent units offers a home for up to 5 persons. Dwellings for persons with reduced mobility are located on the ground floor in two southern buildings.

The other layout is a maisonette with less area per floor, but with at least one separated room. Sanitary

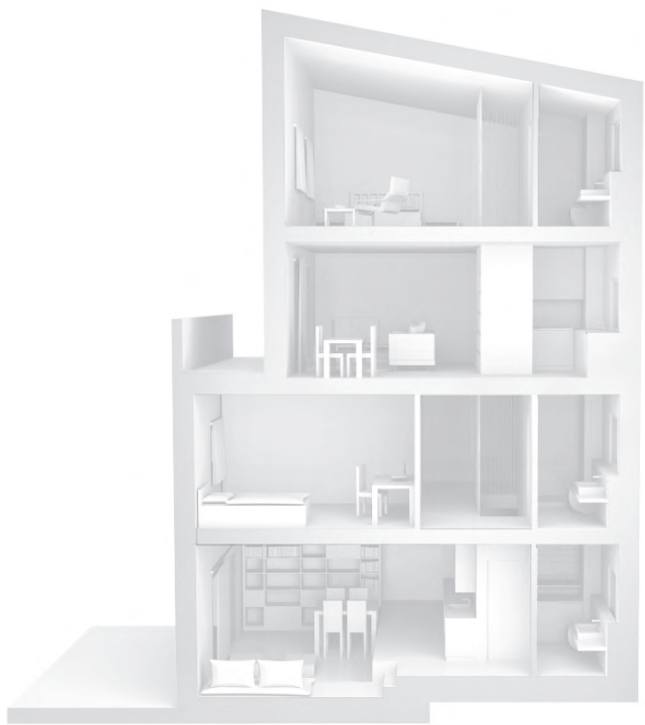
core is situated on the street facade, so the rest of the apartment is oriented towards the pedestrian zone.

East-west building orientation provides better light and heat absorption and natural ventilation. Common rooms are oriented to the west, bringing the most light in the afternoon. Shrubs and trees in front of the building serve as natural protection against sun during hot summers.

Roof gardens placed above the single-floor dwellings are designed for users who enjoy being in contact with ground but do not own a garden. The view from the top floor reaches sea and the old town peninsula. Each unit has either a balcony or a green surface.

Staircase is wide and occasionally turns into common balcony. Facade is made of reused wooden boards that are put together with a small gap. Space in between allows good ventilation and natural sunlight. This form of staircase offers residents extra space for social interaction.

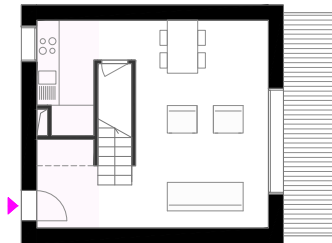
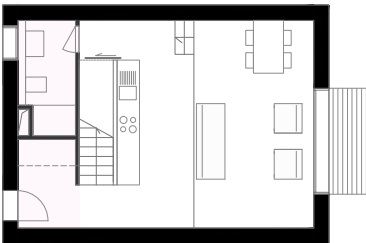
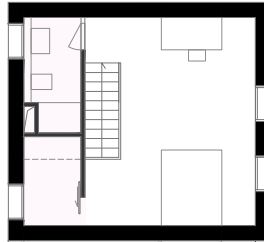
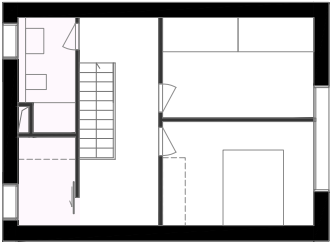
► *Sections show maisonettes in social housing buildings*



MAISONNETTE UNITS 1:200

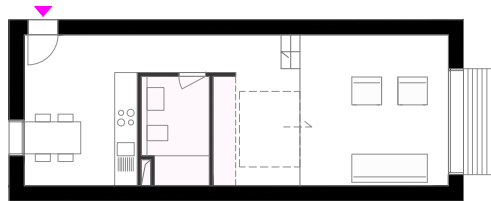
GROUND FLOOR + FIRST FLOOR 85 m²
GARDEN 25 m²

SECOND FLOOR + THIRD FLOOR 65 m²
BALCONY 10 m²

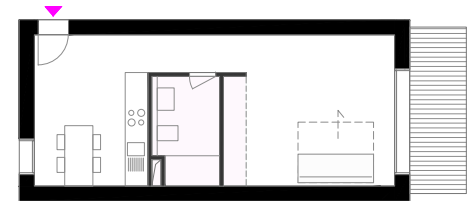


SINGLE FLOOR UNITS 1:200

GROUND + FIRST FLOOR
STUDIO 45 m²
GARDEN 18 - 100 m²



SECOND FLOOR
STUDIO 38 m²
BALCONY 6.5 m²



3-BEDROOM UNIT 94 m²
GARDEN 18 - 45 m²

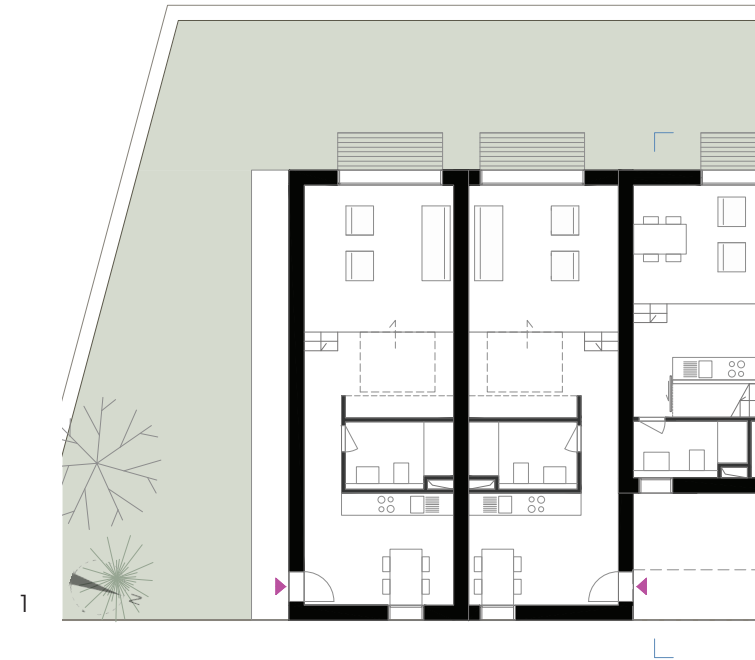
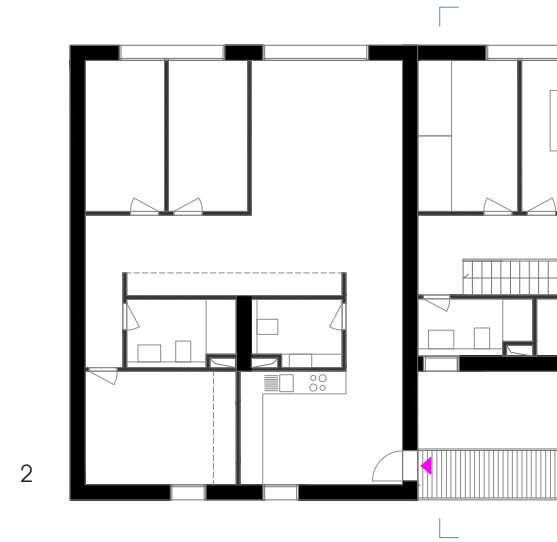


2-BEDROOM UNIT 80 m²
BALCONY 15 m²

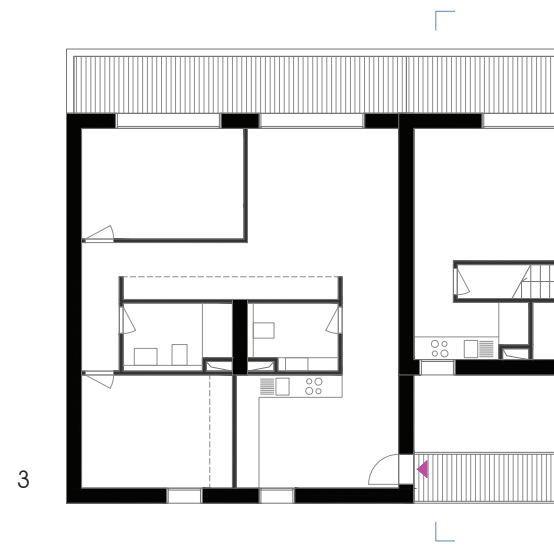
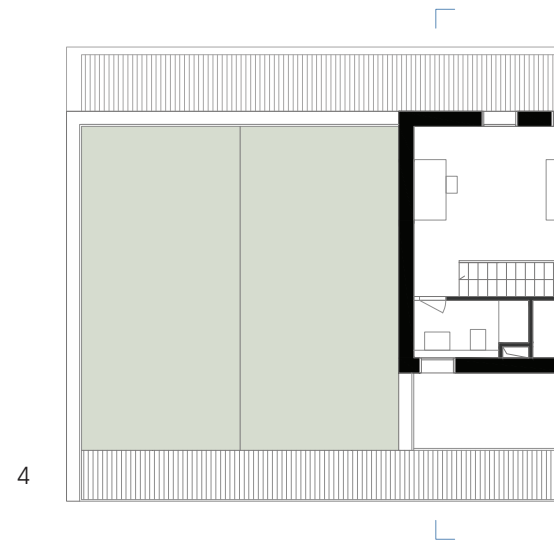


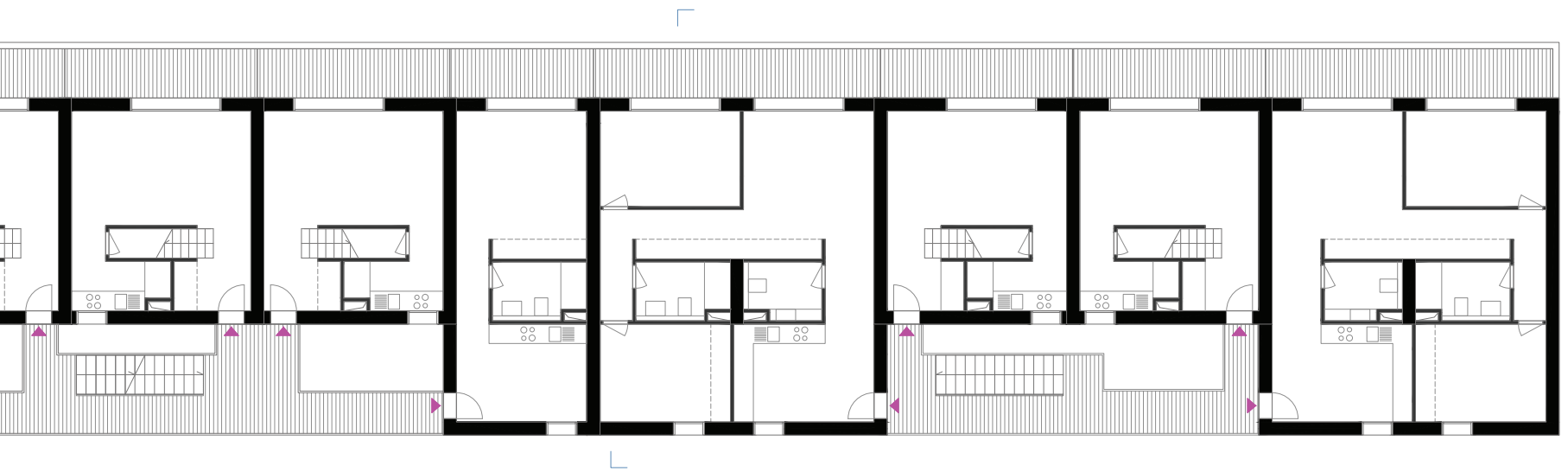
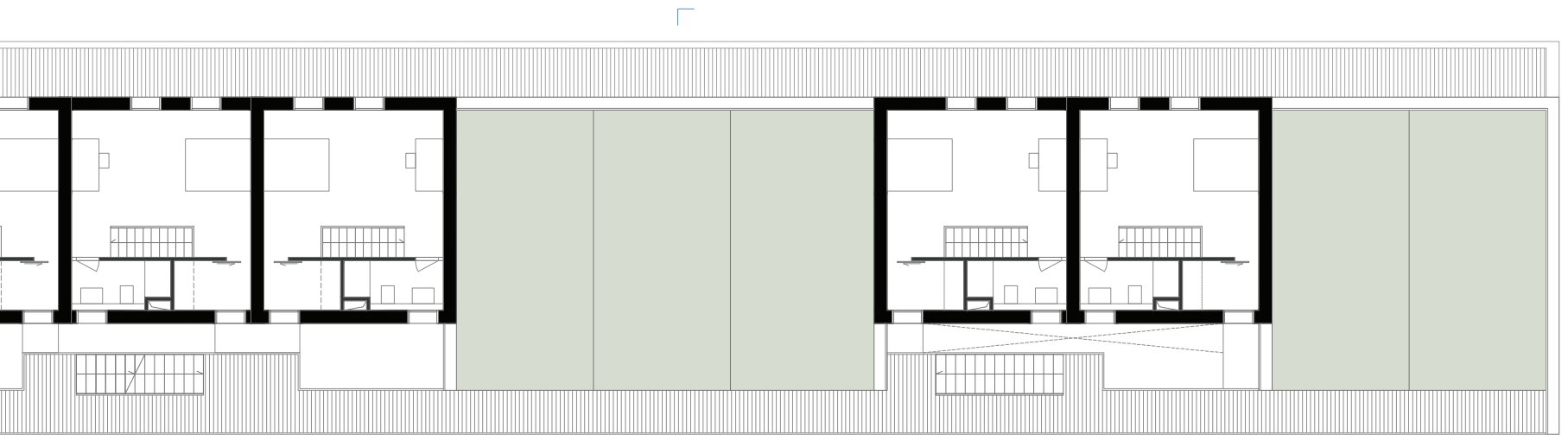
STANDARD BUILDING 1:200

- 1 GROUND FLOOR PLAN
- 2 FIRST FLOOR PLAN
- 3 SECOND FLOOR PLAN
- 4 TOP FLOOR PLAN



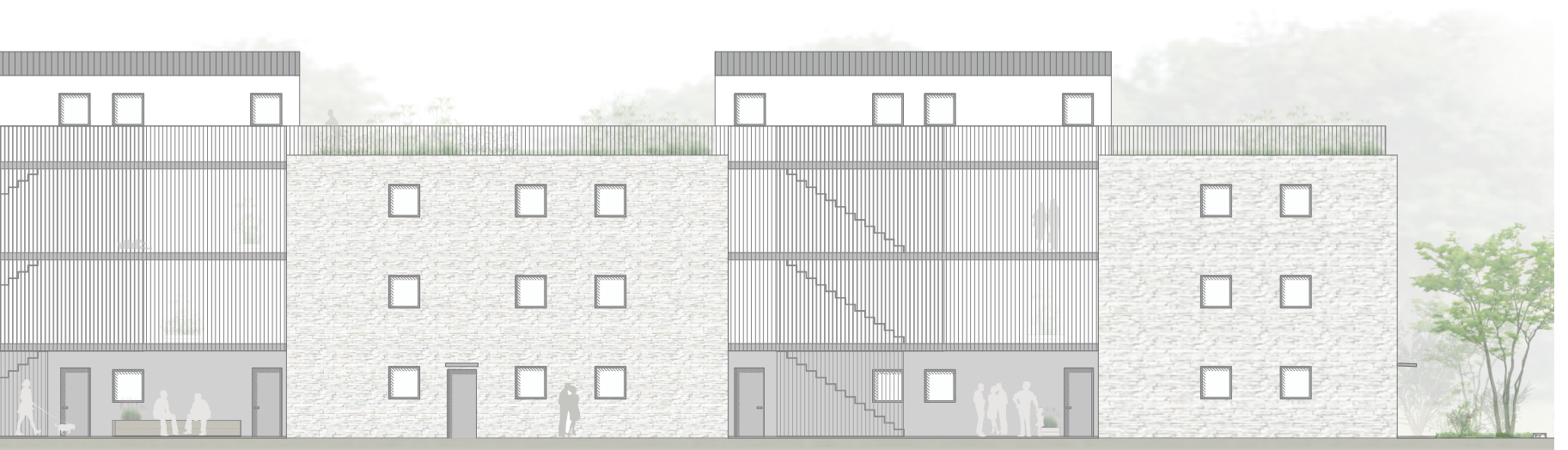






5 CROSS SECTION MAISONNETTE
6 EAST ELEVATION
1:200





7 CROSS SECTION SINGLE FLOOR APARTMENT
8 WEST ELEVATION
1:200





SEMI-DETACHED HOUSES

Pedestrian lanes separate dense housing buildings from the more comfortable house blocks with private gardens. Blocks are composed of 4 up to 8 dwellings (per block), from 108 to 148 m².

Each section has at least one dwelling with a second living room on the rooftop. Spacious rooftop terrace offers a view on the seaside and historic town centre.

Units are oriented in the north-south direction and have access to both sides. Furthermore, houses benefit from a balance between a private green surface in the inner part of the complex and the more interactive street side of the house.

Street façades protect residents' privacy. Existing window openings on the ground floor are put in the indents in the wall that stretch all the way to the ceiling. This forms cosy patio perfect for socialising and absorbing vivid spirit of the street.

Private side of the house has access to the garden and offers residents a peaceful oasis where they can relax from the stressful daily routine. Openings on this side are larger and allow sunlight to brighten the interior of the apartments.

Two sided orientation of buildings captures benefits of contrasting climate conditions: rooms on the northern side will be more occupied in summer, whilst south oriented rooms will be pleasant during long winters.

► Sections show two different apartments on the opposite sides of the house. Ground floor on the south (left fig.) and upper floor on the north (right fig.) form one housing unit

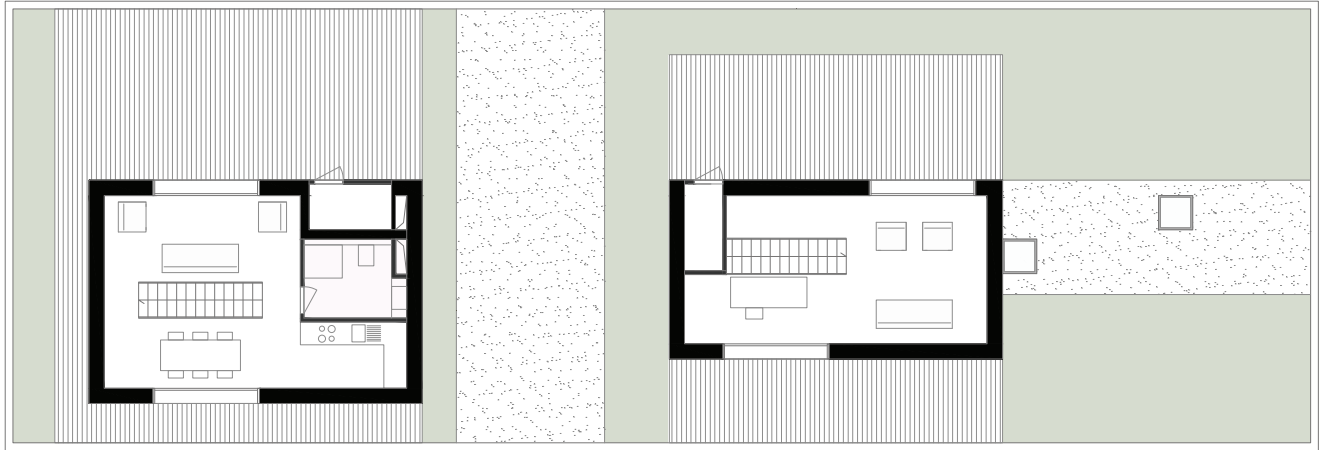


STANDARD BUILDING 1:200

- 1 GROUND FLOOR PLAN WITH GARDEN
- 2 FIRST FLOOR PLAN
- 3 TOP FLOOR PLAN



3

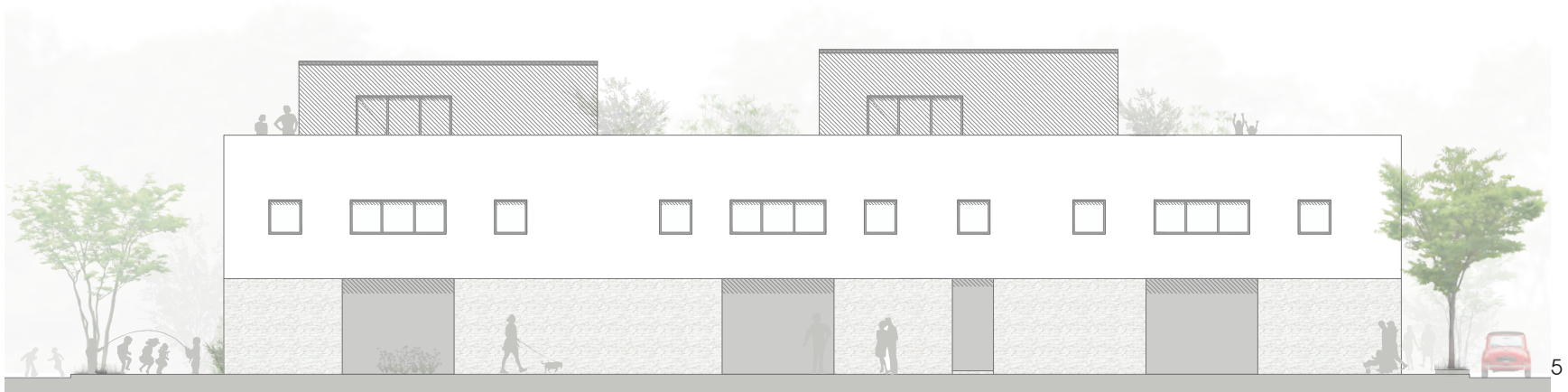


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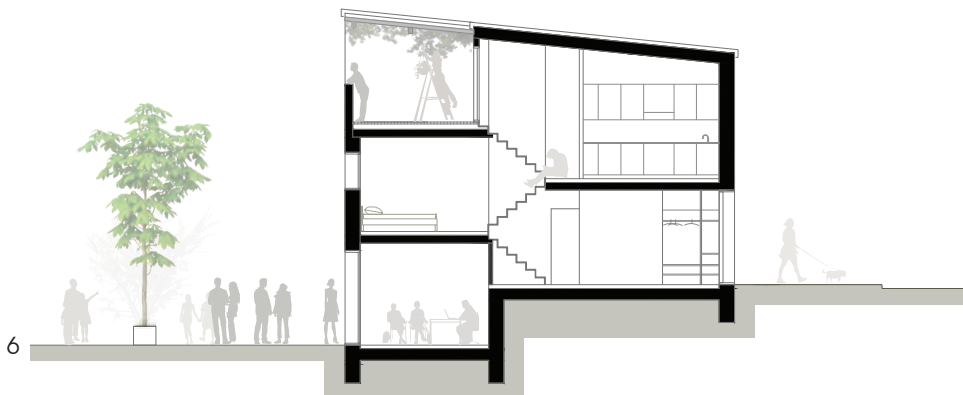
4 CROSS SECTION
5 NORTH ELEVATION
1:200





5

6 CROSS SECTION URBAN ROW HOUSE
7 SOUTH ELEVATION SEMI-DETACHED HOUSE
1:200





URBAN ROW HOUSES

Urban row houses are located along the frontal part of the site and interact with public facilities. They accommodate couples or families up to three or five members. Composed of only two storeys and a rooftop terrace, they make the smallest housing blocks in the entire complex.

There are two subtypes of urban row houses. They're both split-level houses, but differ in their dimensions. Smaller dwelling is 5x10 meters large, whilst the bigger one is 8x10 meters. Ground floor room facing street side is suitable for either a garage or a living room. Opposite side of the dwelling, however, offers less privacy and is planned for work, hobbies and other similar activities.

Convenient location makes this space perfect for running a smaller business. Situated in a busy pedestrian zone it offers exposure and easy access for entrepreneurs. Users are free to modify and change the purpose of the rooms according to their needs.

Stairs, sanitary facilities and storage space are compactly placed in a 2 meters wide core that spreads over the entire length of the house.

First floor is reserved for private area. Smaller window openings ensure discretion but allow daylight to brighten the interior.

On top of the house, there is a spacious terrace with a view over the entire town. It is covered by pergola that offers protection from strong sun and poor weather conditions.

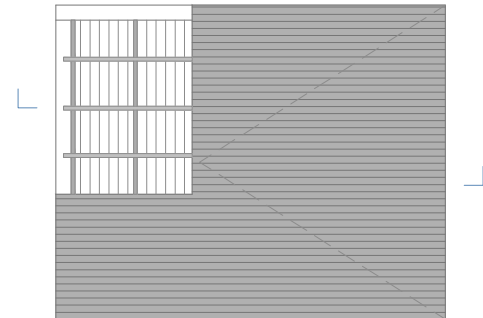
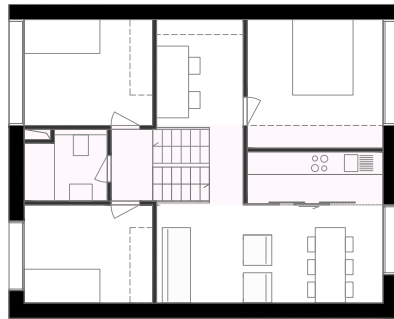
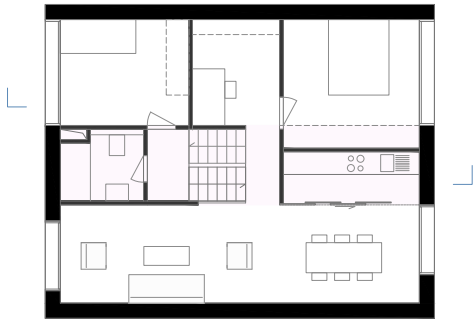
► *Sections show one of the possible row house layouts*



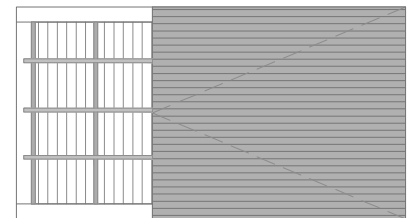
SPLIT LEVEL UNITS

TYPE A 142 m²

ROOF TERRACE 15 m²

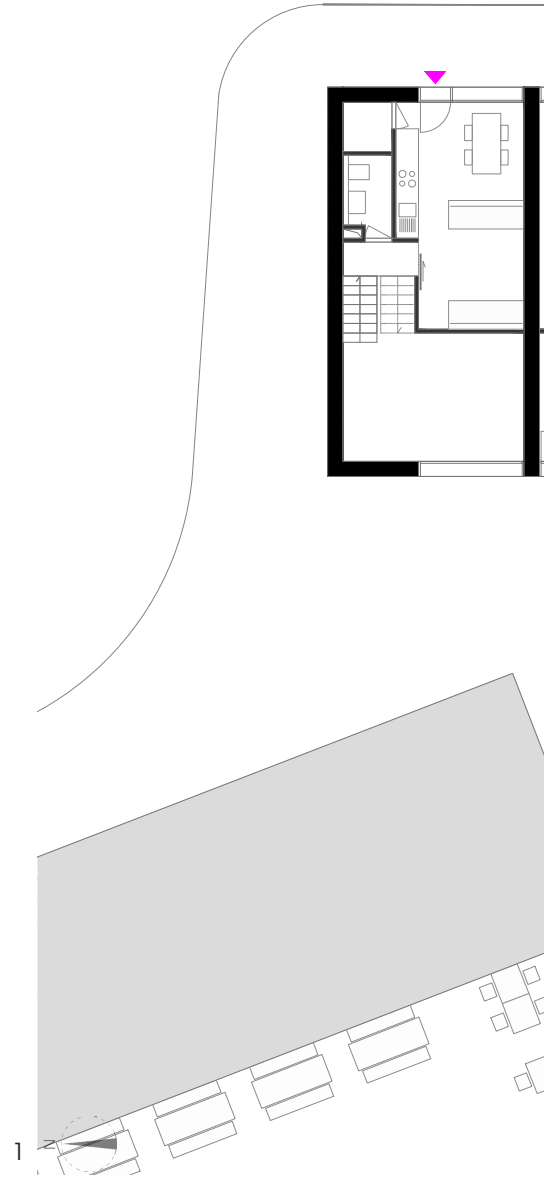


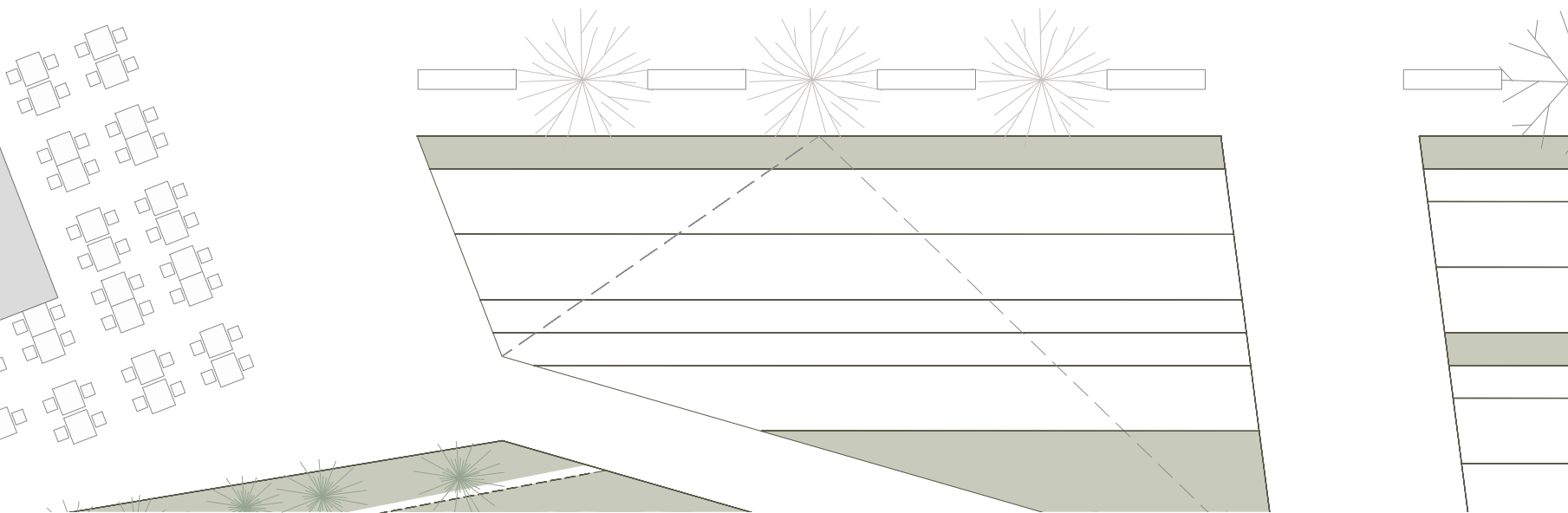
TYPE B 90 m²
ROOF TERRACE 15 m²



STANDARD BUILDING 1:200

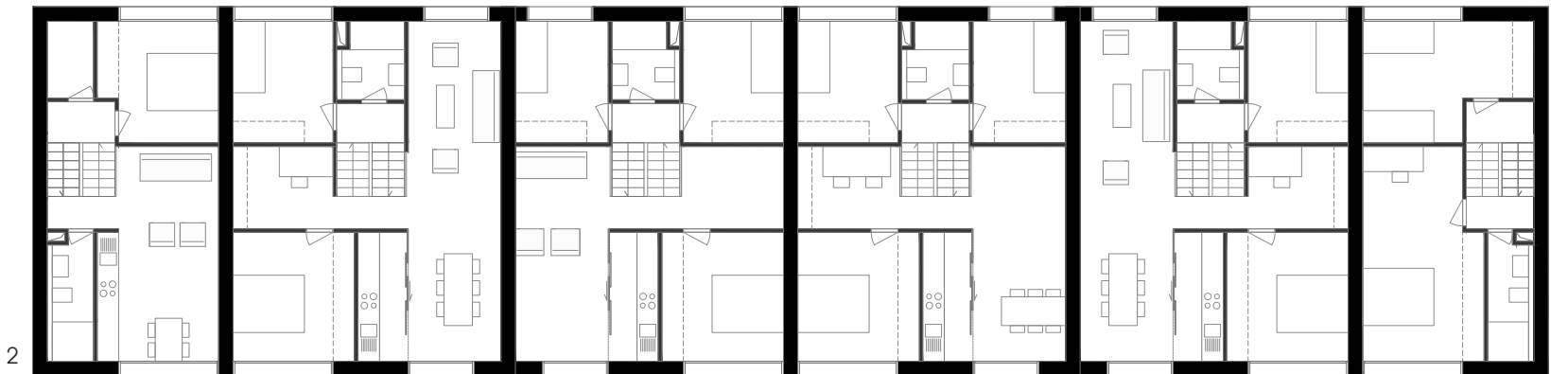
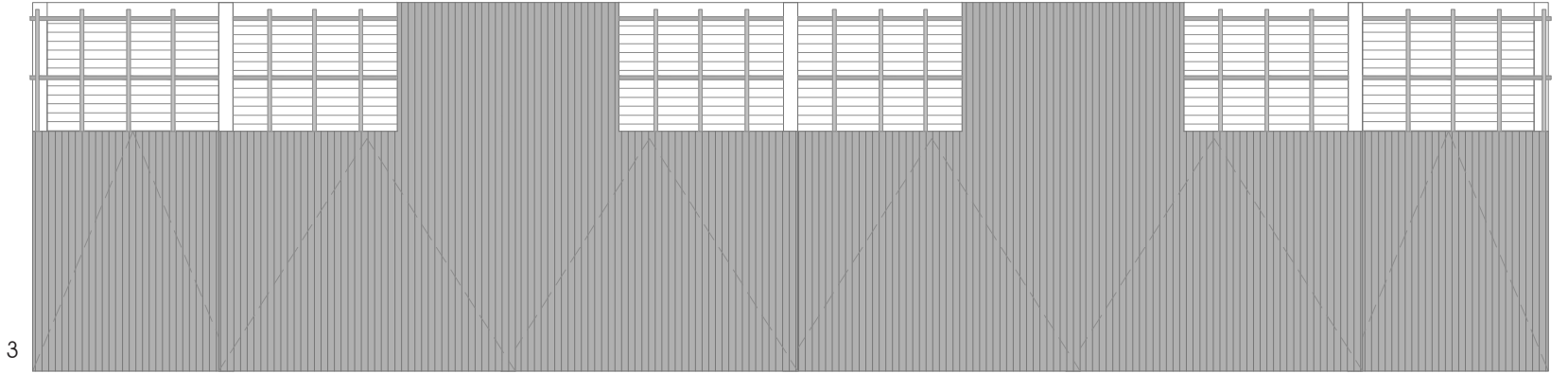
- 1 GROUND FLOOR PLAN
- 2 FIRST FLOOR PLAN
- 3 ROOF VIEW



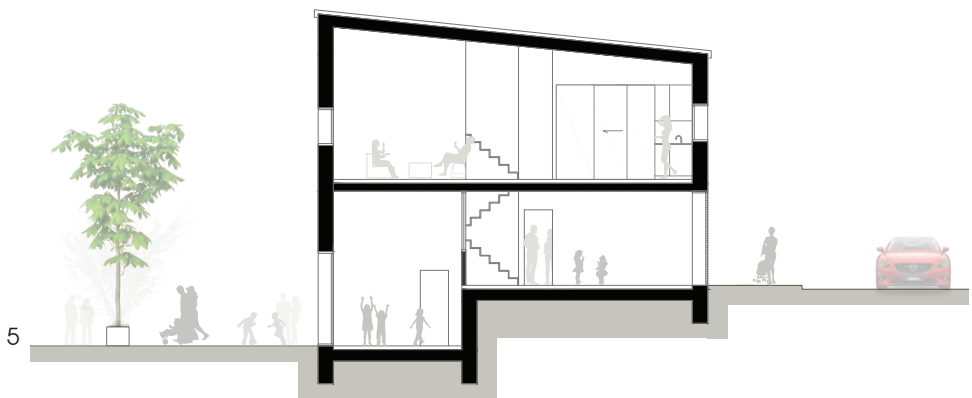


4 EAST ELEVATION 1:200





5 CROSS SECTION
6 WEST ELEVATION
1:200





3.2 STRATEGY FOR LOW COST BUILDING

NATURAL POTENTIAL

Housing orientation can save a lot of money around the year. During hot summers residents benefit from the protection from the sun, but in winter they appreciate every sun ray that reaches their homes.

Most housing blocks are oriented towards west. Together with windows on the south side of the house, house positioning saves energy and money.

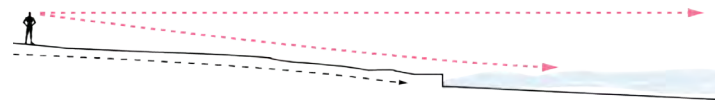
Windows facing east are beneficial all year round. Morning sunshine enlightens the room, yet the outside temperature is not high enough to create unpleasant room temperature. Windows on the east and north façade on most housing units are rather small to prevent heat loss.

Naturally inclined terrain towards the coast contributes to better air circulation, rainwater drainage and greater amount of daylight in the neighbourhood.

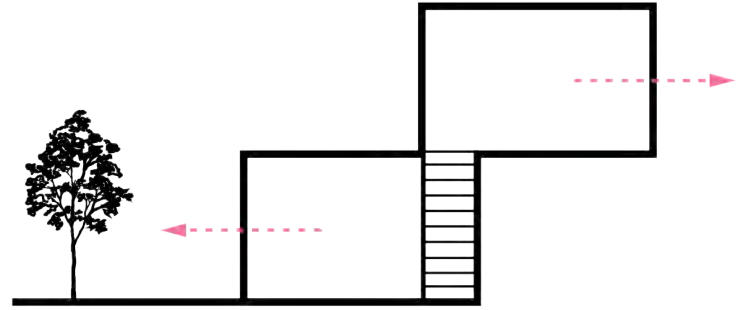
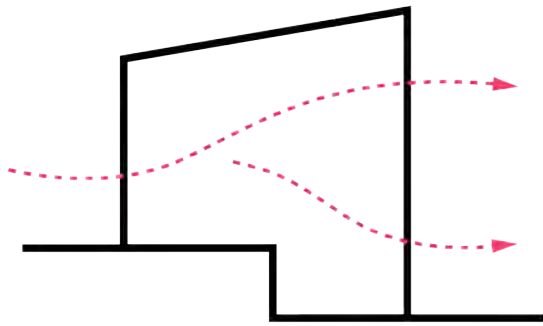
Diverse regional vegetation contributes to aesthetic and function.

Natural potential of the site goes beyond improving building performance. Seafront location generates many benefits. Sea air accelerates oxygen absorption in our bodies. Furthermore, sound of waves brings human brain into deeply relaxed state.

Peaceful environment helps residents relax and feel less stressed. There are no main traffic roads in the nearby area. Life in a zone that is primarily pedestrian and adapted for recreational activities offers escape from stressful daily routine.



- ▲ Terrain is naturally inclined
- ▶ Openings on both sides of the facade improve natural ventilation
- ▶ All dwellings in the complex have openings on opposite sides of the world (illustration shows semi-detached house with windows on the south and on the north)



CONSTRUCTION

Due to limited resources, technological solutions are not used as a primary tool for building smart houses. Instead, rational approach to the standard construction principles was taken to create energy efficient homes.

As already seen in floor plans, houses are densely distributed. Compact building volumes require less resources, speed up the building process and, at the same time, leave more space for natural environment.

Most densely built area is located at the edge of the site. Majority housing units are located in that part of the complex. Staircase facade is made of recycled wooden boards that let the breeze flow in. Absence of elevator stimulates people to walk more and interact with their neighbours. There are also dwellings customised to the needs of disabled persons. They are located on the southern part of the site.

Joint indoor staircase and sanitary core are essential element in liberating space from unnecessary walls. Result is simple floor plan and layout that is easy to

modify according to the preferences of the user. Wooden stairs are open and light. Space beneath them can be used as a shelf, storage or sitting area.

Windows and balconies play an important role in this project. There are several types of windows. Inspiration for facade design and windows was found in the nearby former fish factory, which will remain in the renewed site.

Transparent window films and heavier light coloured drapes are examples of low cost solution against overheating during summers. This feature is particularly useful on the western facade, which receives most of the sunlight. Their efficiency has been proved to save energy for heating and cooling.

Vegetation surrounding social housing buildings creates shade on the west side. This helps retain apartment's cool and saves energy. Windows on the south and west facade are significantly larger than windows on the north and east. For that reason, they require greater protection from the unfavourable weather conditions. Exterior roll blinds are installed to

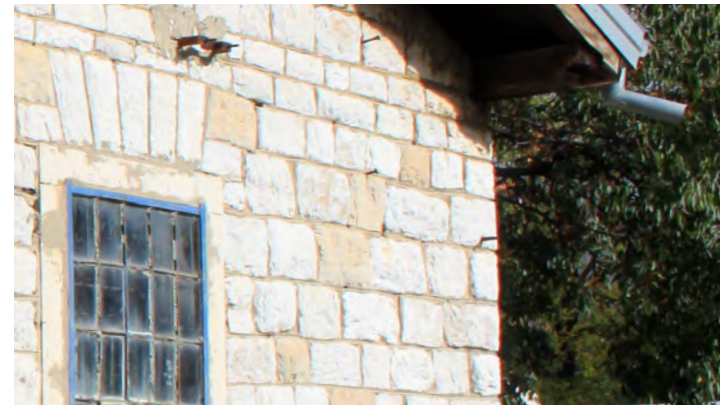
address this issue. East and north windows, on the other hand, are covered only by drapes or inner blinds.

The reuse of recycled materials is proven to be effective when it comes to sustainable design.

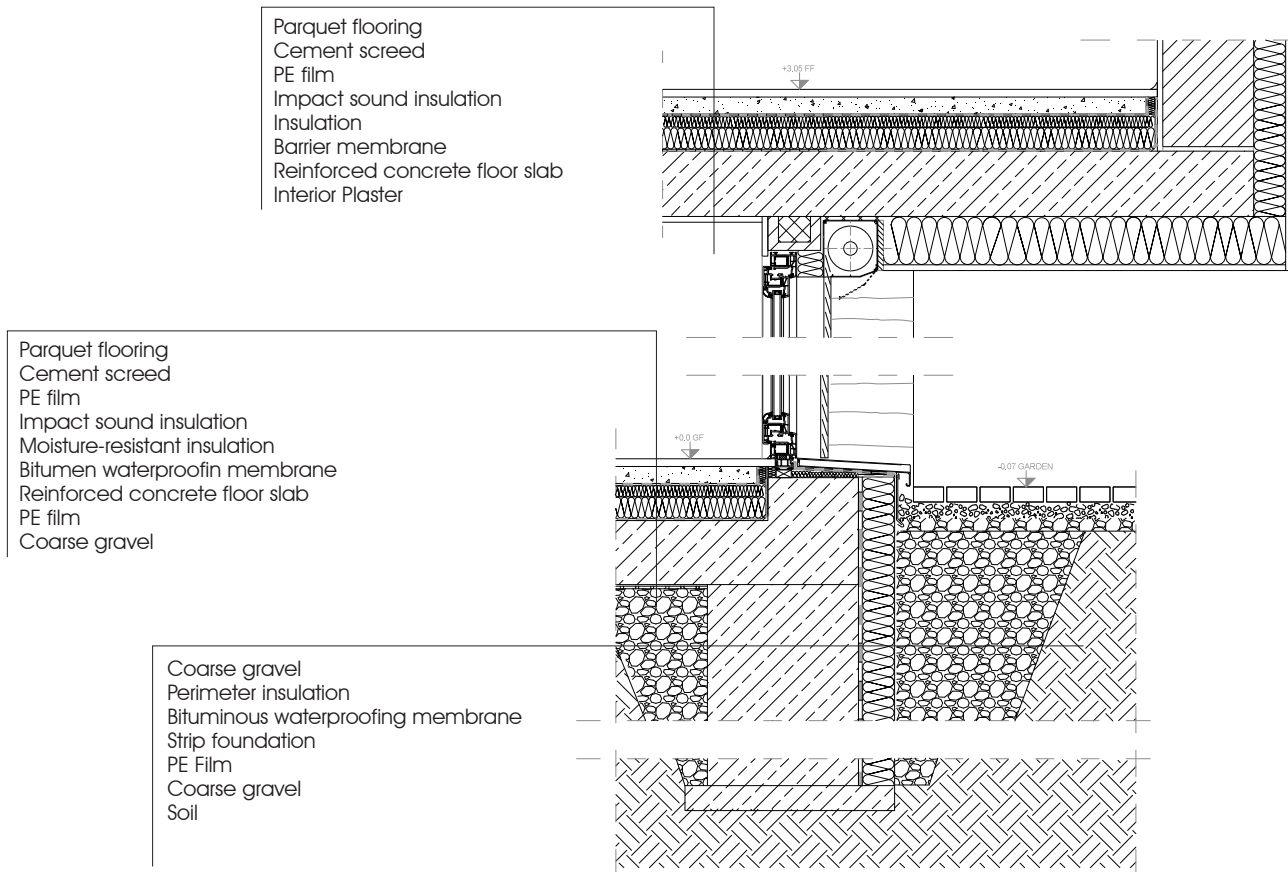
Materials existing on the site, such as bricks and wooden elements from demolished buildings, trees, and other structures will be reused in the renovation process. Stone bricks and timber boards from the waste

materials disposal site are used in construction of footpaths or façades. Demolished trees became part of the decorative staircase facade.

Part of the green surface is used to build housing objects. To compensate for reduction in vegetation, private rooftop gardens are planned for social housing buildings. Roof gardens are yet another way to encourage people to spend more time outdoors and live in close touch with nature. Natural insulation helps reduce energy waste and control room temperature of the top floor. Rainwater collection supports plant growth.



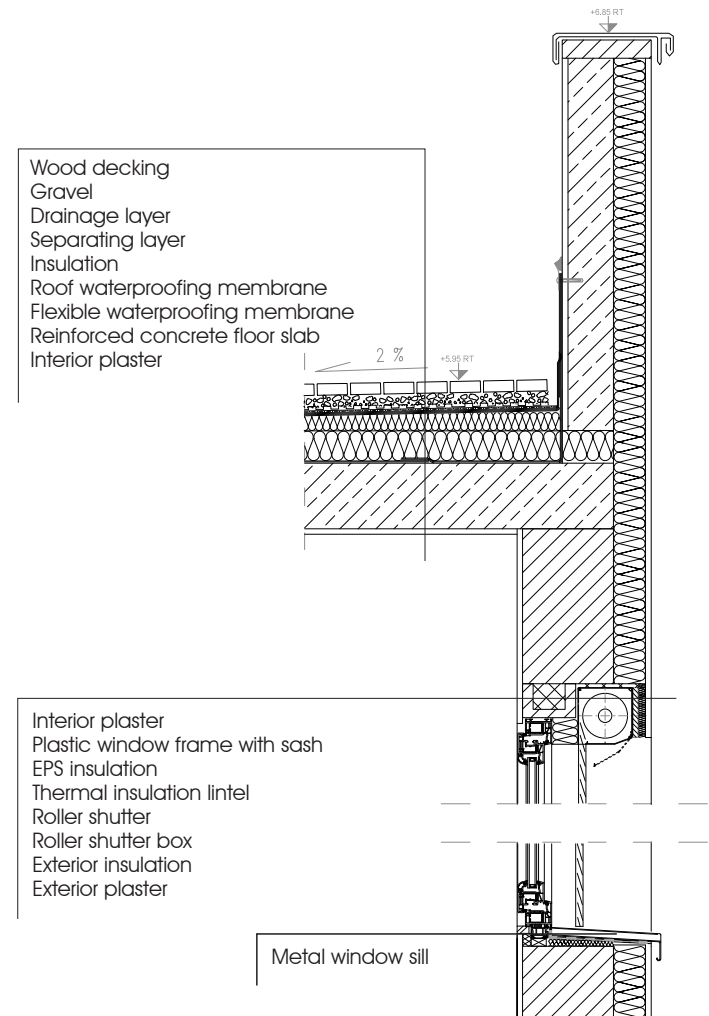
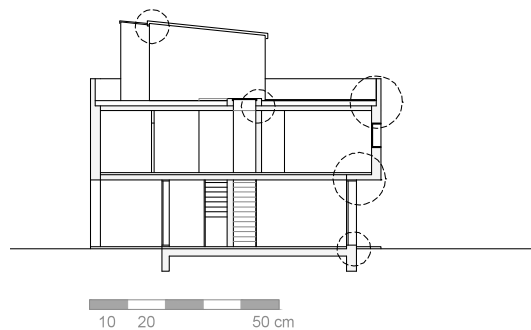
CONSTRUCTION DETAILS



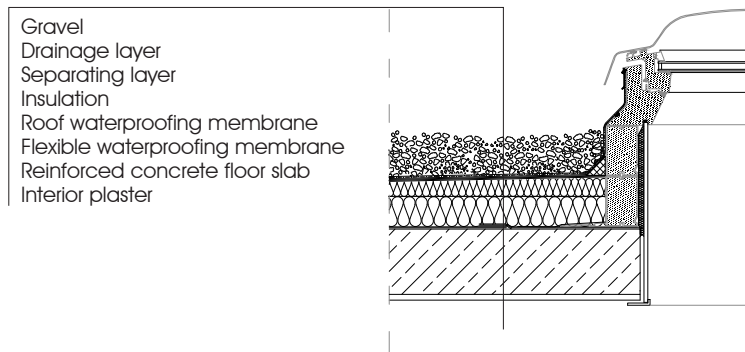
Buildings' façades in quiet area are divided in two sections. Base is covered in stone veneer base and upper floors in white plaster to leave the impression of lighter structure.

Stone façade covers social housing buildings all the way up to balconies. Semi-detached houses, on the other hand, have only their bases covered in stone. Section details show both façade structures.

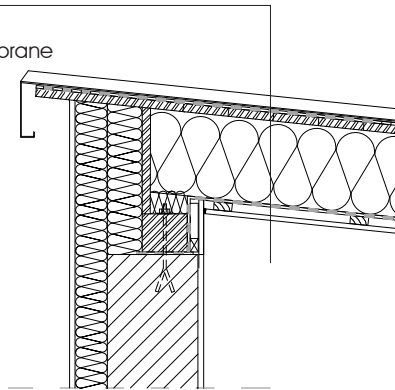
Windows and roller shutters are plastic to facilitate maintenance. Dark grey windows contrast light coloured stone facade.



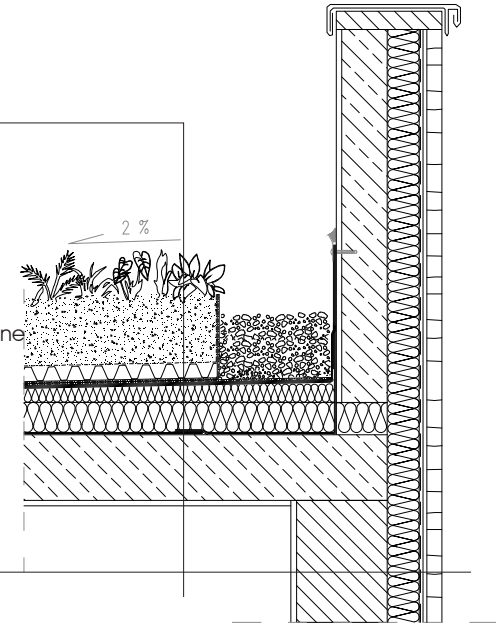
Skylights in central dwellings are placed above the top of the stairs. What would otherwise be the darkest part of the apartment is now provided with natural light. Velux's Integra flat roof window (90 x 90 cm) with electronic controlling is taken as an example.



Metal roofing
 Roof waterproofing membrane
 Timber form work
 XPS insulation
 Battens
 Plasterboard



Intensive vegetation
 Lite top
 System filter
 Garden drain
 Drainage layer
 Separating layer
 Insulation
 Roof waterproofing membrane
 Flexible waterproofing membrane
 Reinforced concrete floor slab
 Interior plaster



Interior plaster
 Brickwork
 EPS insulation
 Metal lath
 Scratch coat
 Mortar setting bed
 Natural stone veneer

- ▲ Stone facade will become part of the pathway
- ▲ Bricks from existing buildings can be reused for new structure
- ◀ Retained industrial hall

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