



**GDAŃSK UNIVERSITY
OF TECHNOLOGY**

FACULTY OF ARCHITECTURE

Redevelopment study of Darłówko waterfront

Author: Krzysztof Budynek



View of Darłówko from the river site

Abstract

This study considers waterfronts transformation in aspects of urban development. Scandinavian and German port cities were present as best examples for introduction to the process and synthesize its possible directions. The main, subsequent study is the case of Darłowo where huge new investments are being build. The future of port cities is determined by such development. The high intensity of the process determines its extraordinary dynamics. Sustainability and broad environmental considerations are pivotal to the theme.

Keywords: urban development, sustainable development, waterfront, Baltic Sea, Darłowo

Spis treści

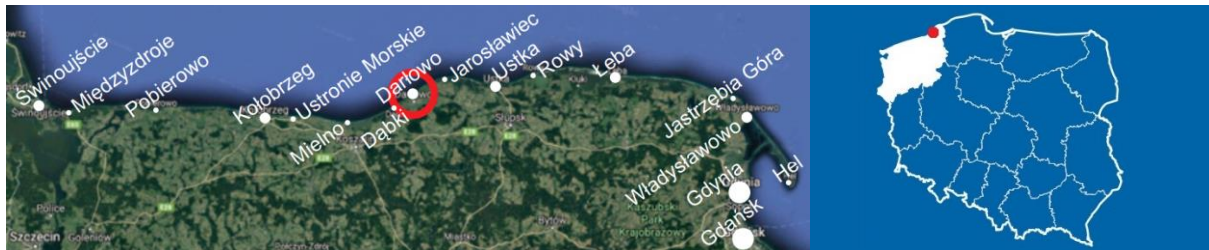
| | |
|--|----|
| Abstract | 1 |
| Definition of the problem area..... | 3 |
| Localization..... | 3 |
| The problem area | 4 |
| Transformation of Scandinavian and German port cities | 6 |
| Evolution of small port cities..... | 6 |
| Evolution of tourism: yachting and second home..... | 6 |
| Example of Stralsund..... | 7 |
| Example of Ahlbeck | 8 |
| Example of Assens..... | 9 |
| Conclusion | 10 |
| Analyses of the project area Darłowo | 10 |
| History | 10 |
| Demography and statistics | 11 |
| List of transhipments in the Sea Port of Darłowo | 12 |
| Analyses of the entire urban agglomeration..... | 13 |
| Character of the urban tissue..... | 13 |
| Cultural heritage..... | 15 |
| Ecophysiography | 16 |
| Land utilization | 18 |
| Urban development vision of Darłowo and Darłówko - municipality point of view..... | 18 |
| Development vision of the entire urban agglomeration..... | 20 |
| Selection of the detailed project area..... | 20 |
| Analyses of the detailed project area..... | 20 |
| PROJECT | 21 |
| Urban development project..... | 21 |
| Architectural project | 22 |
| Reference list..... | 23 |

Definition of the problem area

Darłowo (German: Rügenwalde) is a seaside tourist town with an area of 19.93 km². It is divided into two parts: Darłówko in the sea side and Racisław. In turn, Darłówko is separated by a river into Darłówko East and Darłówko West. About 15,000 people live in Darłowo. It is also surrounded by two lakes: Kopań and Bukowo Lake into which the Wieprza river used to flow.

Localization

Darłowo is a town in north-western Poland, in the West Pomeranian Voivodeship, the seat of the rural commune of Darłowo, the largest city in the Sławno district. Situated on the Baltic Sea, in the valley of the Wieprza and Grabowa rivers, on the Koszalin Coast, in Western Pomerania.



Darłowo location on the map of Poland and the Polish coast

It is one of the many port towns of the Polish coast, in its close vicinity there is the spa village of Dąbki and a small seaside village of Jarosławiec which is a seaside resort with an accommodation base estimated at 30,000 people.



The Baltic Sea basin with the location of the compared port towns

In the Baltic Sea basin it presents as one of about 200 ports, although it is very unique due to its fabulous history and interesting urban composition. The trade union of Hanseatic League cities established cooperation with Darłowo as early as 1361, contributing to its development, also the Scandinavian ruler Eric of Pomerania took care of it. It must be noted that Europe's cultural richness lies in the diversity of its cultures. Historically layered works of architecture are proof of their interpenetration and coexistence, which could spread and evolve thanks to maritime connections. The seaside centers mentioned for the essay are Stralsund, which is also a Hanseatic city, the district of Ahlbeck on the border with Poland, and the small town of Assens on the island of Fionia in Denmark.

The problem area

Darłowo is divided into two auxiliary units of the city: Darłówko, a typical tourist seaside part with numerous guesthouses, and Racisław, a part inland, which has a historical residential and service center and a typical residential outskirts. Residential areas stretching along and perpendicular to the Wieprza River creating a cross-centric model. There is also a modernist, prefabricated housing estate nearby. The historical part with the seaside part is extensively connected by three roads creating a specific communication framework. That can determine the potential areas for future investments and expansion of the city, but the flooding issue need to be considered here. From the south side there is a railway line along which industrial and warehouse areas are located. The line continues to the naval aviation military unit located in Darłowo. Along the river in the Darłowo aquatorium there are port areas and areas of fishing activity. The city also has two marinas accessible from the river. In the coastal part, the strict tourist center, which is extremely crowded in the summer season, is a promenade formed by Władysława IV and Kąpielowa streets, connected by a historic sliding bridge. Darłowo also has other monuments: a lighthouse, massive granaries. The most impressive is the medieval, orthogonal layout of the town on the rights of Lübeck with a square market in the center and the castle of Pomeranian dukes with the remains of defensive walls. Darłowo is also valuable for environmental reasons, the entire northern part of the city is covered by the protected landscape area: Koszaliński Pas Nadmorski. In addition, there is an endangered species *sea holly*, whose presence in the dunes belt is exposed from the seaside boulevard financed from European funds.

Darłowo is undoubtedly an exceptionally valuable object with a very large historical and natural cultural heritage. It also has a well-developed transport infrastructure and a large accommodation base. The events of recent years show that it is a relatively interesting area for the location of high-standard residential investments which always has an environmental impact.



Functional scheme

The list of high standard residential development of Darłowo shore in recent years:

- Marina Royale is a huge, high-standard apartment complex, the construction of which began in 2015. These are three buildings of hotel, residential, commercial and services functions. The total amount of apartments is about 300. The first of the buildings, a cubature dominant in the shoreline of Darłowo (photography 1), is already on the market.
- Amon Apartments is the first building in Darłówko with such a direct view of the sea. Provides for 15 apartments built in 2016.
- Bursztynowe Komnaty is a luxurious apartment complex, composed of three buildings, completed in 2015. The facility includes 90 apartments located on three floors and 80 garage boxes in the basement.
- Kropla Bałtyku is an apartment building built in 2016. It has 47 apartments accessible directly from the boulevard. There are plans to expand the investment with another building in the future. It is also worth mentioning the Kropla Bałtyku housing estate of 110 premises built in the same year by the same investor, about 500m from the sea.
- Baltic Korona is a housing estate of 135 apartments, 500m from the sea. Build around 2017.
- Nautic Park is a seven-story residential building which construction started in 2020 and will be completed in 1 year. It provides 68 apartments.
- Natural Baltic (Aparthotel Aton) is a seven-story building consisting of 78 apartments in the Aparthotel system. The construction began in 2020.
- Hotel complex Plażowa is a six-story oblong building. It is a five star hotel facility with 200 rooms, a conference room, a swimming pool and other attractions, which is planned to be built in 2022.



Schwarzplan of Darłowo and localization of recent new development (also under construction)

The above graphic shows the dynamism of the development of the Darłowo seaside area. It has been estimated that the aforementioned investments bring over a thousand new housing units to the market within a few years. Information about the maintenance of the observed trend is emerging from unofficial sources. The well-known spatial expression of Darłowo changes significantly, first of all by transforming the waterfronts. These processes are a considerable challenge for urban planning. The principles of sustainable development and landscape issues of spatial order may be difficult to maintain under heavy investment pressure. On the other side the investments are undoubtedly a chance for development for the city.

Transformation of Scandinavian and German port cities

The purpose of this part is to briefly characterize port cities, using the analysis of representative examples - comparable centers with a relatively similar specificity. In the choice, were selected German and Scandinavian cities, due to similar cultural and historical conditions, despite their relatively different physiognomies. Such a limited analysis will allow to synthesize the target processes, both positive and negative, taking place in small port cities. These processes will also serve to outline the probable scenarios of Darłowo development.

Evolution of small port cities

An immanent feature of port cities is their melting pot location where land and water meet, drawing both from the goodness of the lands and the wealth of waters. This is the reason why waterside areas are a natural place for clusters of human settlements. Settlements established often on the natural shores of seas, rivers and lakes not only benefited from such a neighborhood, but also significantly influenced their formation (Hudson 1996, p. 1). In the case of coastal cities and settlements, the location of these settlements was directly related to the pursuit of the economic use of the sea, therefore they were created, among others, in the form of fishing settlements (Lorens 2013, p. 14). Along with the development of civilization, the intensification of trade, the dissemination of transport, progressing militarization (sea fleet, fortifications), there was a continuous process of urban evolution. However, it should be remembered that it is the limited dynamics of development that is the key factor for which small port cities remain small. The classic models of port cities presented in the literature (Vigarie 1979, O'Connar 1989, Seassaro 1996, Marcadona 1997), focused on the function fall into the background, along with the marginality of the city function, which was sufficient for the location of a given city, but remained insufficient to its further expansion.

Consequently: while the fishing or port function at a certain historical stage of development was sufficient to support the city's economy, it is very possible that nowadays, in the case of small port cities, it is no longer so. The decline in employment in fishing is related to the limitation of catches and the decreasing profitability of this profession (Rembarz 2019 p. 73). The process is illustrated by abandoned cutters, but also collapsing shipyards or unused terminals and storage areas. The redundancy of the port function manifested in this way, from the city's point of view may paradoxically become a serious obstacle to its development. The problem of revitalization of post-port, post-industrial or post-military areas is therefore associated with the need for functional conversion, preferably preceded by economic and spatial restructuring (Krośnicka 2010 p. 1).

Evolution of tourism: yachting and second home

The universality of tourism is a relatively contemporary phenomenon. In past epochs it was an almost epiphenomenal occurrence, as a consequence of trade and religious or, curiously, military expeditions. In turn, the typical approach to tourism has been reserved for the royal families and a small upper class for millennia. An interesting example of an activity that will serve as a kind of litmus test of socio-economic changes is the phenomenon of pleasure yachting.

“Doing something solely for your pleasure, actually and fully for your pleasure, requires appropriate conditions: liberation from poverty and ... free time, and this was the reason for the possibility of the emergence of yachting seeds almost 400 years ago” (Głowacki 1983 p. 9).

Latin civilization is an example of a civilization of prosperity and freedom, where poverty is a marginal phenomenon, which translates into universal consumerism and the need for a developed service sector. For example, the Scandinavian port city of Dragør, located near Copenhagen, has turned from a historic fishing village into a picturesque summer resort with harbors converted into yachts (Rembarz

2019 p. 25). Yachting is spreading from elite activity to the middle class, which is also evidenced by the emerging investments focused on a specific individual client. Local examples of completely new luxury apartment complexes with a rich service offer enriched with the possibility of mooring a yacht or motorboat in the neighboring marina are: Yacht Park in Gdynia and Sol Marina in Gdańsk. This type of investment, as well as numerous apartment investments typical of small charming port cities, very often also function as a second home, contributing to the seasonal nature of the functioning of these cities. As an important digression, it should be noted that it is the dynamics of these changes that translates into the physiognomy of cities by first modifying their water fronts and creating a new unique identity.

The modern history of the Eastern bloc countries was undoubtedly unfavorable for development as such, which translated into a noticeable delay in the above-outlined process of the evolution of port cities. In the period preceding the political transformation, the tourist movement was based on organized leisure in holiday centers. The release of individual entrepreneurship has developed the broadly understood service sector with a focus on the individual client, contributing to the development of tourism. However, "the main drawback of the transformations taking place in small port cities is the domination of the function of residence tourism and subordinating it to the rhythm of town life. During the summer season, there are 3–4 times more people in port cities than in the winter. This leads to the creation of many dubious quality spatial solutions of a temporary nature" (Krośnicka p. 54). Functioning in the convention of economic freedom without developing appropriate procedures leads to spatial chaos.

Generalizing: the diachrony of this function conversion in the case of small port cities is as follows: fishing as a dipole reason for the city's location, then the development of the main - port function along with the development of transport and trade, ending with the dominant tourist function, which began to spread from around the 19th century. However, it is the ratio of these specific functions and their economic justification that translates into the real activity of the city, which may seek economic optimization in their diversification.

Example of Stralsund



View of the old town with the church of St. James

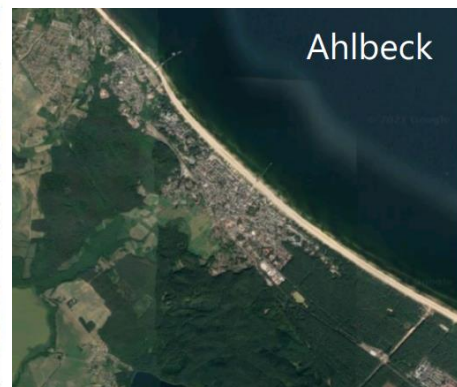
Stralsund is a Hanseatic city in the Pomeranian part of Mecklenburg-Vorpommern, Germany. It is located at the southern coast of the Stralsund, a strait of the Baltic Sea separating the island of Rügen from the mainland. Population of the city is 59 139 and the area of Stralsund is 20,21 km². It has granted the city rights in 1234.

Stralsund lies on the Baltic Strait of Strelasund, the bridges connecting the city with the island of Rügen is the longest suspension bridge in Germany. The old town is additionally surrounded by three ponds,

which gave it a historically insular location. Stralsund obtained city rights modeled on the Lübeck law in 1234, and in 1293 became a member of the Hanseatic League. The city, despite military conflicts with the rulers of Denmark, quickly became one of the most important Baltic trading cities. When the hanza lost its position, so did the city, but trade and shipbuilding remained its main economic branch. During the Reformation, the city was its pioneer in North Germany. After the Thirty Years' War, Stralsund was under the rule of the Kingdom of Sweden, and in the 19th century it became a Prussian city. During the Second World War, many architectural monuments were completely or seriously damaged in a bomb attack. During the German Democratic Republic, many blocks of concrete were built in the city, and the historic Old Town began to fall into ruin. At that time, the city's economy was based mainly on building ships for the Soviet Union. After the political breakthrough in 1989, the situation changed. Stralsund has become a model when it comes to supporting construction and the protection of monuments in the city. The historic city center and the port have been completely restored with the help of a government program. As well as the residential districts of prefabricated blocks. In 1989, the population index of Stralsund (over 75,000 inhabitants) reached its highest level. Since then, this value has continued to decline.

Tourism is the most important branch of the economy in Stralsund. The old town creates the unique character of Stralsund. There are 500 out of over 800 monuments of the city. In the old town you can see great architectural diversity, with many charming gabled merchant houses, brick Gothic churches, narrow streets and squares. A relatively large part of the medieval city walls has also been preserved. In 2002, the Old Town of Stralsund was inscribed on the UNESCO World Heritage List. In the old square, next to the monuments, there is a modern block of large panels - which together form a specific cross-section through the architectural history of the city. Ferries and cruise liners connect to the Stralsund city harbor. In the summer months, it is also the berth for large cruise ships. Many dining options, hotels and museums have been built in the city, as well as a large aquapark, yacht center, and ferry companies that attract masses of tourists, also in the off-season. Stralsund is active in the "New Hanseatic League" which aims to develop trade and tourism in its member cities. In addition to tourism, there is a shipyard in Stralsund as the city's most important industrial plant, and various metallurgical companies are located within it.

Example of Ahlbeck



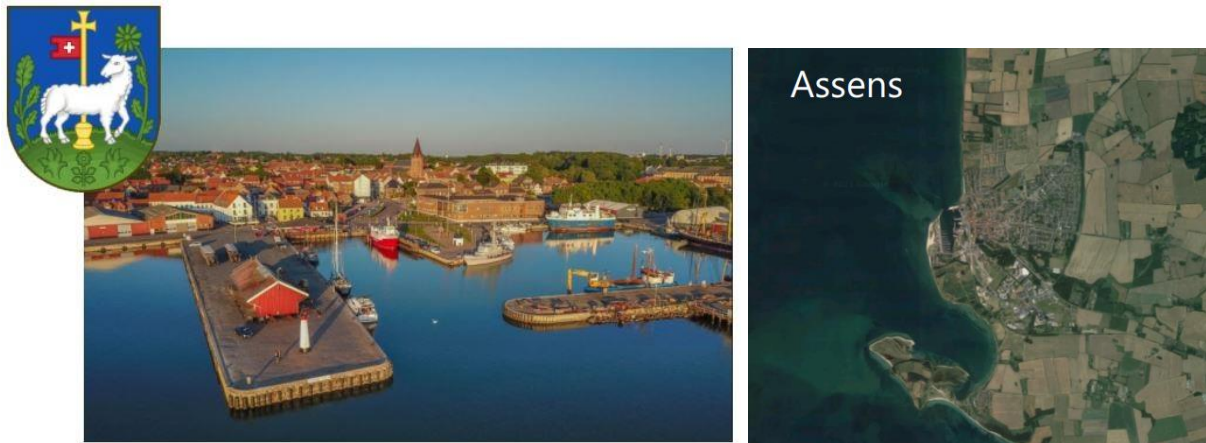
Waterfront of Ahlbeck

Ahlbeck is a district of the Heringsdorf municipality on the island of Usedom on the Baltic coast. With population of 3 438 habitants. It is the easternmost of the so-called Kaiserbäder ("Imperial Spas") seaside resorts on the German part of the island, situated right next to the border with Poland and the town of Świnoujście. Until January 1, 2005 Ahlbeck was an independent commune, on that day three imperial spas were merged into the commune of Heringsdorf.

The first colonists in the place of today's district were fishermen and millers, who in 1699 were granted permission to locate a mill with a granary. The village was gradually expanding and the first holidaymakers came from the mid-nineteenth century. The established church organization contributed to the collection of funds for the construction of the church. In the following years, the settlement expanded and in 1908 it obtained the status of a commune with the name of Seebad Ahlbeck. After the political changes of 1991, there was a thorough urban reconstruction and modernization of the town.

The area which should be paid special attention when analyzing this example of a seaside settlement is its coherent architecture. In Ahlbeck dominates the classical style, characteristic of coastal bathing areas. Following the main promenade, along Dune Street, there is a wide beach on one side, and on the other, buildings that create a unique waterfront with refined visuals. The dominant colors are white, blue and beige. The whole is complemented by the details of soaring turrets and rectangular windows. One of the key buildings preserved in the spa style is the hotel "Das Ahlbeck". The Baltic thermal baths consisting of six pools also prove the spa character. The compositions are diversified by the historic 280m-long pier with an Art Nouveau clock at the entrance.

Example of Assens



Seaside of Assens

Assens is a town with a population of 6,016 (1 January 2020) on the west coast of the island of Funen on the eastern side of the Little Belt in central Denmark. Assens has an area of 4.7 km² and is located 41.2 kilometres southwest of Odense by road. Assens is the municipal seat of Assens Municipality in Region of Southern Denmark.

In the past, the main function of the city was local transport by means of a ferry from the island of Fioni to the Jutland peninsula, its location was also conditioned by the topography - the natural bay is the best location for the port. It was probably a trading city already in the 13th century, it gained special importance in the 16th century through the export of cattle around which the city based its favorable economic conditions. The Assens ferry was the main island-mainland connection. During the Swedish wars, which was also caused by the plague, the city suffered a lot but kept its role as the main ferry. Prosperity culminated in the early 19th century when a new port was built. The second half of the 19th century was disastrous for Assens. Assens ceased to be a ferry because the southern part of the Jutland peninsula was occupied by the Germans. The functions of the main ferry were taken over by the nearby Middelfart, to which the railway line increased the city's competitiveness.

The location of the city itself was determined by physiographic factors, but the city's function for many years ensured its economic prosperity. With the loss of this function, the city was also marginalized in

terms of transport accessibility, the railway to Assens was led 20 years later than to the competitive Middelfart. In order to support the economy of the city, it was decided to locate a sugar factory there, which at the end of the century employed 300 people, but in 2006 it was closed. Today the town still has a small shipyard also a few metallurgical and chemical factories.

The variability of the city's economic situation depends on many external factors, such as wars or plagues, but also on the neighboring cities in the region on the basis of competitiveness. On the other hand, basing the economy on one main function is uncertain and it is recommended to diversify it.

Conclusion

The physiognomy of port cities is constantly changing. Due to their number and peripheral nature, small ports have seldom been in the spotlight. Although the waterfront as the most important areas of these cities - as the name suggests - will always be on the front line of any change. Small port cities face many challenges. The key to their economic situation seems to be their functionality, taking into account regional conditions. Therefore, revitalization, conversion or diversification, leading to sustainable development of localities, must be perceived in a regional context. "(...) in the case of Polish port cities, there is also a lack of a certain diversification of the specifics of their activities and the introduction of additional, or possibly strengthening of the existing, functions important for the city (such as the university function in Greifswald, nuclear energy service in Wolgast, etc.). Undoubtedly, for the small port towns of the Polish coast, it is now necessary to diversify their activities and develop functions other than tourism "(Krośnicka p. 61). Thus, differentiation can be found both in the tourism function itself, as a kind of specialization. Such a solution can be any "thematization" of space. In the context of post-tourism, however, this phenomenon is associated with the risk of creating an artificial *Genius Loci*, which somehow contradicts the approach focused on regionalism.

Analyses of the project area Darłowo

History

The greatest concentration of settlements in the early medieval period and later occurred in the coastal belt, usually located at the mouth of rivers. It is dated that in the 10th century there was already a commercial and port center transformed into a fortified town of Dirlow. Formerly, the Wieprza and Grabowa rivers flowed into the sea in other places. Wieprza and Grabów entered the Baltic Sea in four places: near the Dirlow stronghold, through Martwa Woda (Moorbake), the Lichow branch and the Trah branch (Todtes Wasser) to Lake Bukowo. The seashore at Darłowo goes back inland, similarly to other places of the southern Baltic coast. In the last few hundred years, the sea in Darłówek has penetrated inland by at least 250 meters and probably flooded the former Dirlov stronghold (www.port.darlowo.pl).

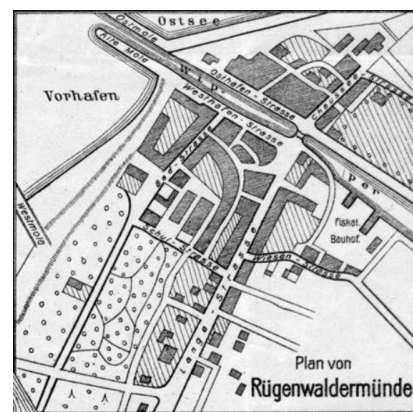
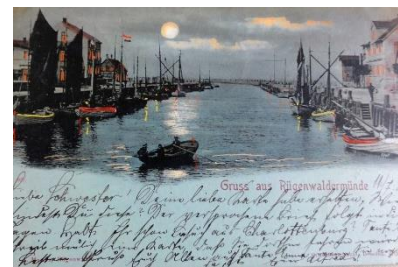
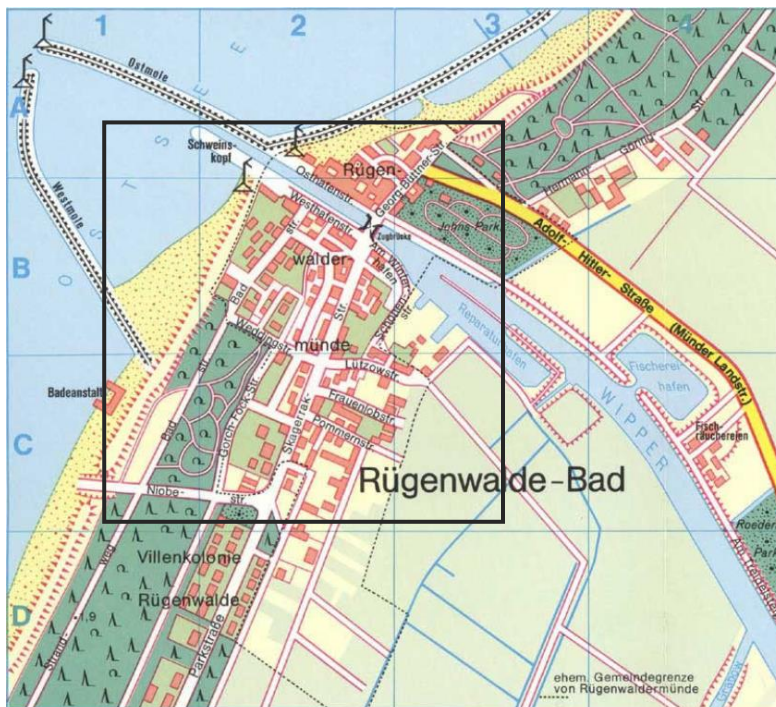
The development of port cities was greatly influenced by the trade union of cities under the name of the Hanseatic League, established in the mid-13th century. In 1412 Darłowo was recognized as a full member of the Hanseatic League. This had a significant impact on the development of the city and the port, which gained more and more importance in international trade. This fact opened not only wide markets in the north and west of Europe, but also significantly expanded the range of goods imported to Darłowo. All these changes contributed to an even faster development of the city. Merchants needed new ships, barrels, ropes, anchors, etc., which resulted in the development of crafts. In addition to trade contacts, cultural contacts increased, and smaller Hanseatic cities followed the larger ones in fashion, construction, architecture, and shipbuilding technology. All this broadened the horizons of medieval society.

History of the port

Historically, the eastern part of Darłówo had a greater function. There were taverns on both sides of the port, the most important being the eastern tavern, where the head of the port who supervised the port works resided. There was also a port ticket office and a place where port statutes were kept, and a port bell stood next to it. From the Thirty Years' War to World War II, the breakwaters and port buildings were rebuilt many times. More pools were built and the fairways were deepened. Bringing to the existing state.

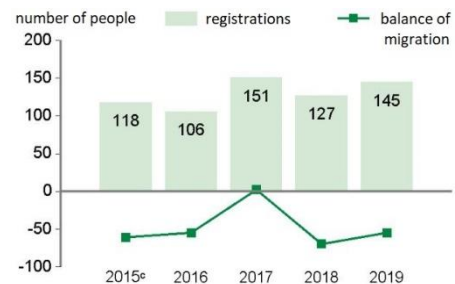
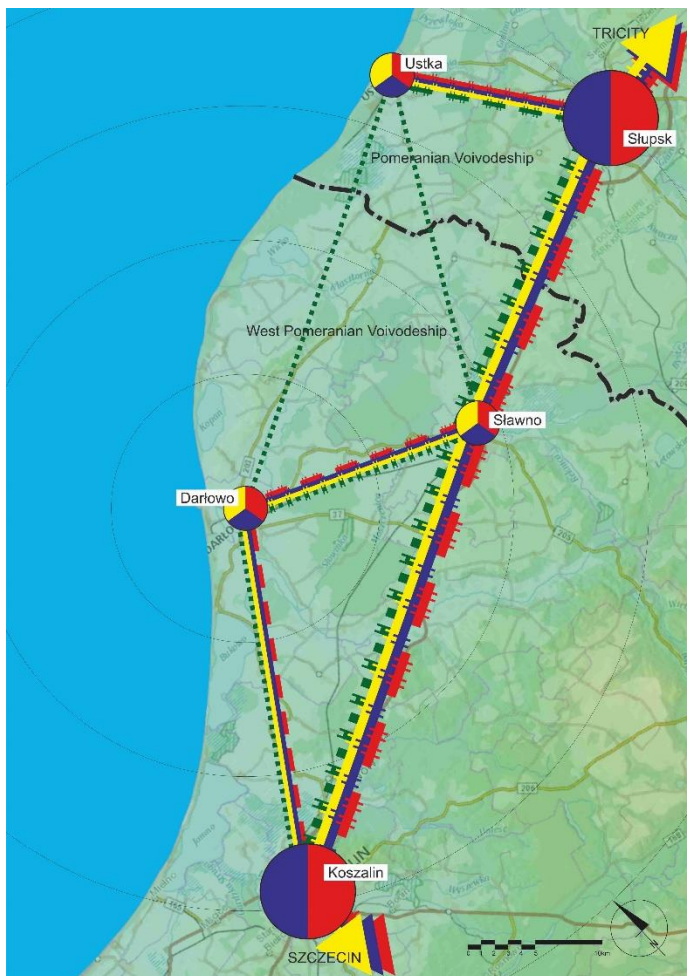
Building structure

On the basis of the maps from 1920 and 1939, it can be concluded that the shape of the urban structure of Darłówek was preserved as well. The observation of the few objects with maladjusted cubature is disturbing. Historically, Darłówo had the image of a small fishing port town, numerous postcards clearly illustrate it, there is a quay with low half-timbered buildings, and numerous fishing boats.

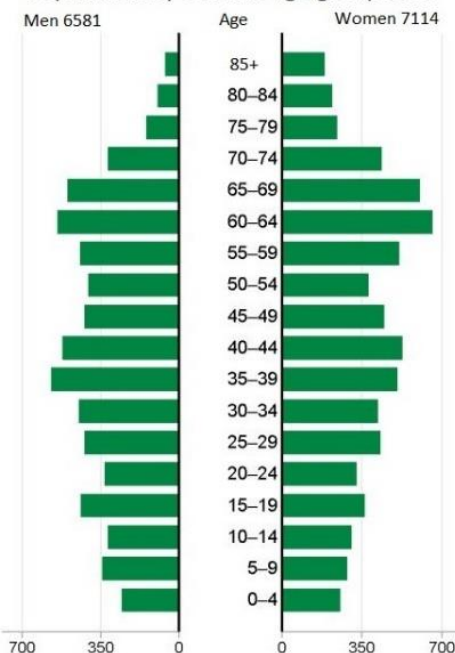


Demography and statistics

Darłówo is a small town with 13,574 inhabitants, of which 52.1% are women and 47.9% men. In the years 2002-2020, the number of inhabitants decreased by 7.2%. Darłówo has a negative birth rate of -67. This corresponds to the birth rate -4.89 per 1000 inhabitants of Darłówo. There are 12.11 deaths per 1,000 population of Darłówo. It is much more than the average value for the West Pomeranian Voivodeship and much more than the average value for the country, 42.5% of deaths in Darłówo were caused by cardiovascular diseases. In 2019, 135 check-ins in internal traffic and 197 check-outs were registered, as a result of which the internal migration balance for Darłówo is -62. In the same year, 10 people registered from abroad and 3 de-registration abroad were registered - this gives the foreign migration balance of 7. 57.8% of Darłówo residents are of working age, 16.0% are of pre-working age, and 26.2% of residents are of post-working age. The share of registered unemployed in the working-age population in 2019 was 6.4%.



Population by sex and age group 2019

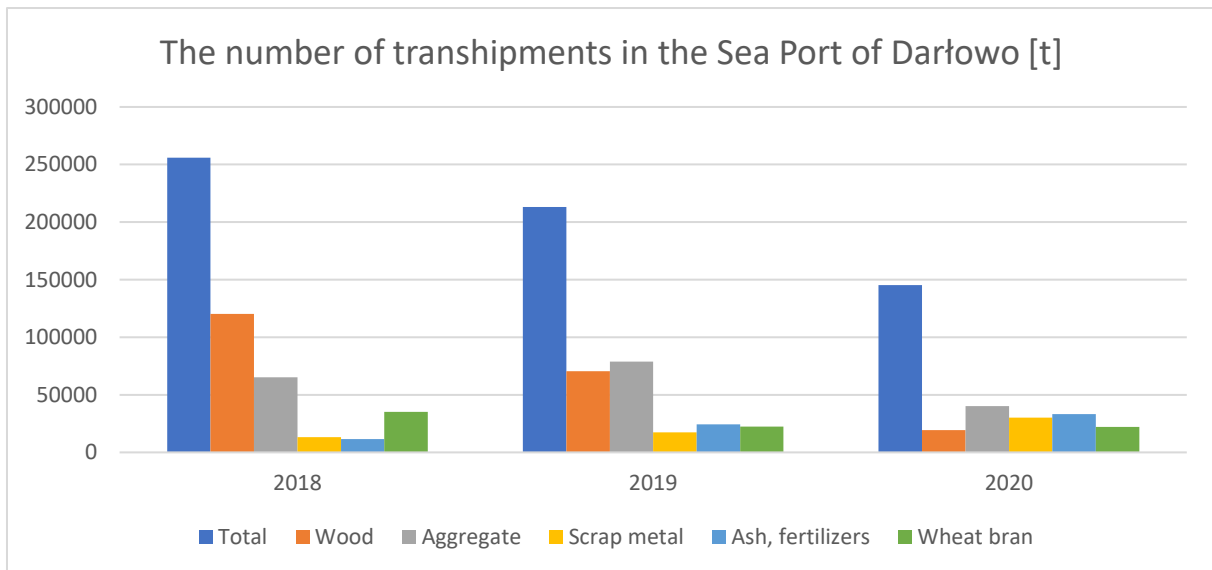


From the perspective of the region, Darłowo depends on the nearby towns. Residents go to Koszalin and Stupsk for work, education and recreation. Specialized services are also provided there.

According to the statistical yearly of the maritime economy: The city of Darłowo was visited in 2019 by 78,040 tourists, including 10,091 from abroad. The rural commune, however, 81,031, including 6,653 from the borderland. The utilization of bed places for 2019 in tourist accommodation facilities oscillates at the level of 49% for an urban commune and 65% for a rural commune. In the case of the occupancy of accommodation places in an urban commune, the holiday months predominate - about 64%, compared to the rest of the months – about 20-30%.

List of transshipments in the Sea Port of Darłowo

Analyzing the transshipments made in the seaport since 1986, Darłowo functions as a port in a relatively unchanged intensity. The largest amount of transshipment is observed in 2015 (about 340,000 tons), the reason was a contract for the transport of stones and aggregates from Scandinavia for a large investment, which was carried out by the Maritime Office in Stupsk - protection of the sea shores from Jarosławiec to Rowy. However, there are years when the port function of Darłowo almost did not exist, for example 2004 with 1,777 tons of transshipment, or 2008 with 3,008 tons. The main imported products are aggregate, ash and fertilizers. Wood, scrap and wheat bran are exported. In addition the Darłowo cutter fleet includes 3 units of 0,1 gross tonnage (GT) in thousands.



Analyses of the entire urban agglomeration

Character of the urban tissue

Darłowo is a city with a low intensity of development, due to its historical roots it has an orthogonal in the center and a centrally diverging arrangement of relatively narrow streets. The buildings that stand out in the city's silhouette are St. Mary's Church and the Castle of Pomeranian Dukes. The cubature dominant may also be the nearby granaries from the Second World War. Regarding the housing development, on the eastern side, it is adjacent to the historic part of the housing estate of blocks made of large panels. It is an assumption from the late 1980s, a composition loosely referring to the historical part - with a large open space in the middle corresponding in size to the historic market square of Darłowo. On the south side, on the other side of the river, there are also 7 apartment blocks from the 1970s. The onshore part of Darłowo, unlike to the coastal part, has a centric layout with housing estates of single-family houses located on its outskirts. Along the railway line on the south side there are industrial areas and the main station. The city is surrounded by agricultural land and sparse areas of allotment gardens. Green areas also extend between the coastal and inland parts of the city, giving it an unique character, valuable in terms of landscape and nature. The coastal part has a rickety, linear layout that stretches along the sea. There is a physical separation of the Wieprza River into the eastern and western part of Darłówko. This creates unresolved communication problems that entail economic and social issues. There are two wind farms in the vicinity of the city.

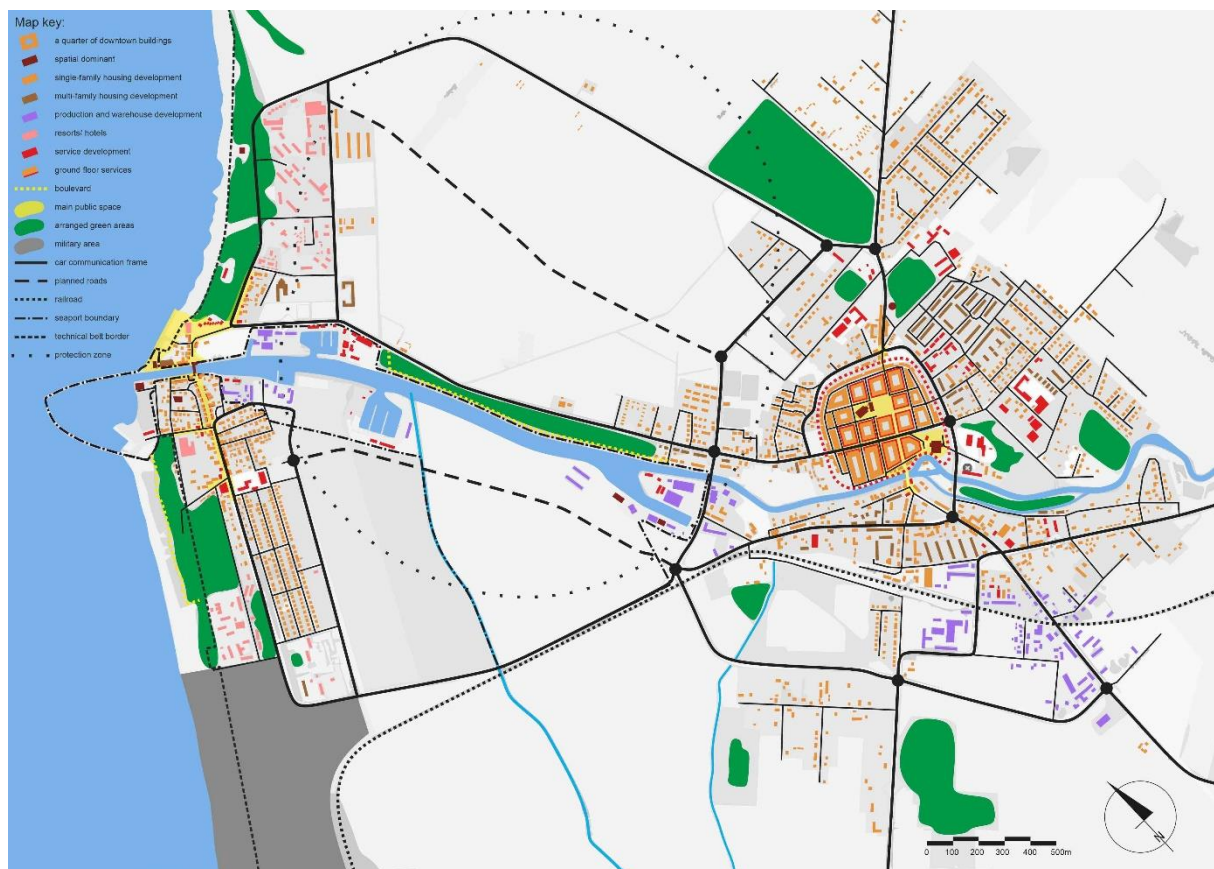


The coastal part - Darłówko

From the perspective of a recreational user, the seaside part of the city is primarily a system of public spaces stretching along the beach, connecting both sides of the river with a sliding bridge. This layout reflects the historical principles of space organization. On the eastern side, there are mostly departmental buildings, characteristic of the communist period. The eastern part, on the other hand, is known for its 1.5 km long orthogonal housing arrangement, consisting of a large number of 3-storey cubic buildings from the 70s, serving both permanent and temporary housing. Heading further west, you will find a civil aviation military base.

Road and pedestrian communication

The issue of communication in the case of Darłowo is very problematic. It is connected both with communication between Darłowo and Darłówko as well as between the western and eastern parts of Darłówko. Due to the fact that the historical part of the city lies on the eastern side, it also prefers this side of Darłówko, hence the best connecting route is located on the eastern bank of the Wieprza river. The importance of this connection is essential for the functioning of the area, which is not reflected in the urban structure. Then, from the perspective of Józefa Conrad Street - the main street connecting functional areas - the Darłówek image presents itself as wastelands, sporadically built-up open areas with a surface parking lot, and unattractive port and fishing industry facilities. In turn, the dominance of the eastern part and the unwanted evaluative division is caused by the difficulty in communication between the two sides of Darłówek. It is implemented only by one sliding bridge intended for pedestrians. Thence the communication systems on both sides of the river is organized separately. Road transport is not able to overcome the barrier which is the river. When it comes to ambulances, they use a pedestrian bridge in special cases. One pedestrian connection significantly limits the use of distant parts of Darłówek, and limits the recreational functions of the whole.



Cultural heritage

Due to its rich history, dating back to the beginnings of shaping the tribal system in Pomerania, Darłowo is an incredibly culturally valuable city. In its history, it was also under the rule of the Dukes of Gdańsk, Brandenburgs, Griffins, and Hohenzollerns, and Eric of Pomerania - the king of Norway, Denmark and Sweden was also born there. In the years 1569-1622 Darłowo was the capital of its own principality with a small territory. This historical wealth is reflected in the architecture and urban planning of the city. Many of the sites are subject to special legal protection due to their cultural value.

Monuments protected by law:

1. **Downtown** - Darłowo has retained a unique medieval urban layout with the market square in the middle as the main square in the city. One gate from the fortifications of the stronghold has survived to this day. Occasionally, places of former fortifications are covered with park greenery.
2. **Castle of the Pomeranian Dukes** - The only seaside gothic castle in Poland built on a plan similar to a square with a 24-meter high tower. The construction of the castle began in 1352 during the reign of Bogusław V, and the beginning of the city's cooperation with Hansa also dates back to this period. In the 18th and 19th centuries, there were warehouses and a prison in the castle, and from 1930 a museum.
3. **Town hall** - baroque, rebuilt in 1725, currently the seat of the city authorities. In front of the town hall there is a fountain from 1919 with a statue of a fisherman.
4. **The High Gate** - the only city gate preserved from the original defensive walls.
5. **Remains of defensive walls** - from the 14th-15th centuries
6. **Church of Our Lady of Częstochowa** - The parish church was built in 1394 in the Gothic style, expanded from the 15th to the 16th century, restored in 1897; consecrated September 1, 1945.
7. **Church of Saint George** - a 15th-century gothic one-nave building.
8. **Church of Saint Gertrude** - original (15th century) foundation of gothic cemetery architecture on a hexagonal plan with a twelve-sided ambulatory; the whole thing is covered with a tented roof with a spire. The interior with a starry vault is decorated with a fresco by the patron saint of sailors, St. Gertrude and the emblems of the shoemakers and brewers guilds. An example of Scandinavian Gothic, unique in Poland.
9. **Watermill complex** - including a water mill from 1894, a gym from 1905, a turbine house from 1905, a residential house from 1919 and a garden.
10. **The Hemptenmachers' tenement house** - built in 1604, rebuilt in 1793 and in the mid-19th century, restored in 2013-18.

Mention also four more historic tenement houses, two historic houses and the former drawbridge in Darłówek on the Wieprza River, from the beginning of the 19th century, but it was pulled down in 1977.

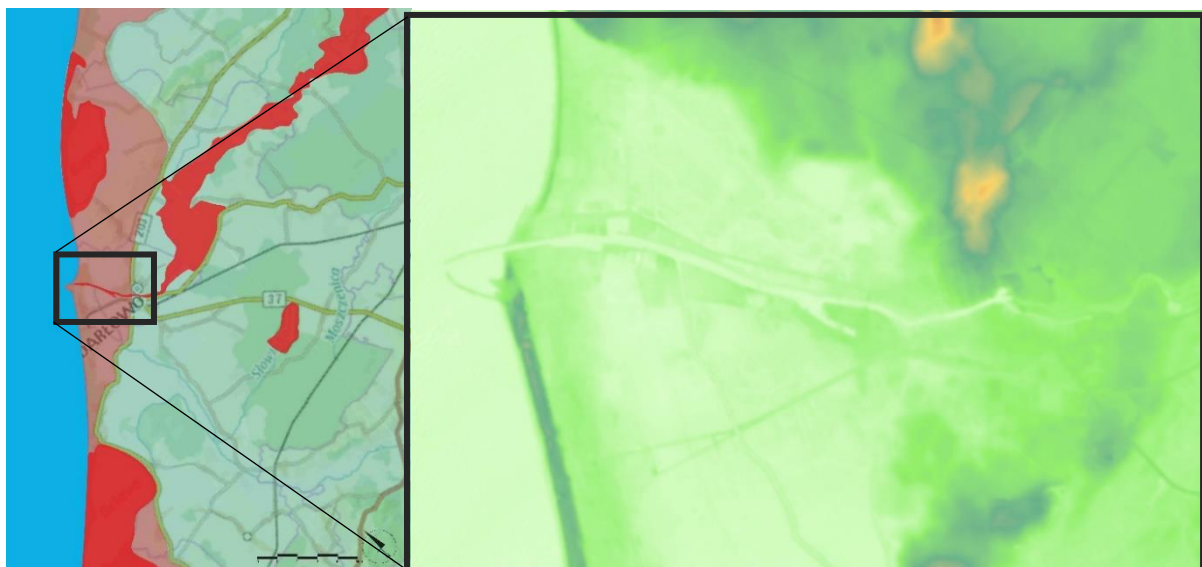


The unique character of the city is its rich history which is reflected in its historic buildings. Authenticity is an essential feature here, which modern buildings should not imitate, but at best reinterpret.



Ecophysiology

Darłowo is located on the Baltic Sea, in the valley of the Wieprza and Grabowa rivers. The highest situated areas of the city are the Jankówek hill, reaching 22.1 m above sea level, and the hill of the cemetery. The lowest, however, is the flood hazard area - the area stretching between the main city buildings on the south side and the Darłówek buildings on the north side. Moreover, the entire northern part of Darłowo is covered by the protected landscape area of the *Koszaliński Pas Nadmorski*. The areas of Wieprza are included in the special *Natura 2000* area of habitat protection, *Wieprza and Studnica Valley*. About 7 km from Darłowo there is the *Sławińskie Błota* nature reserve.

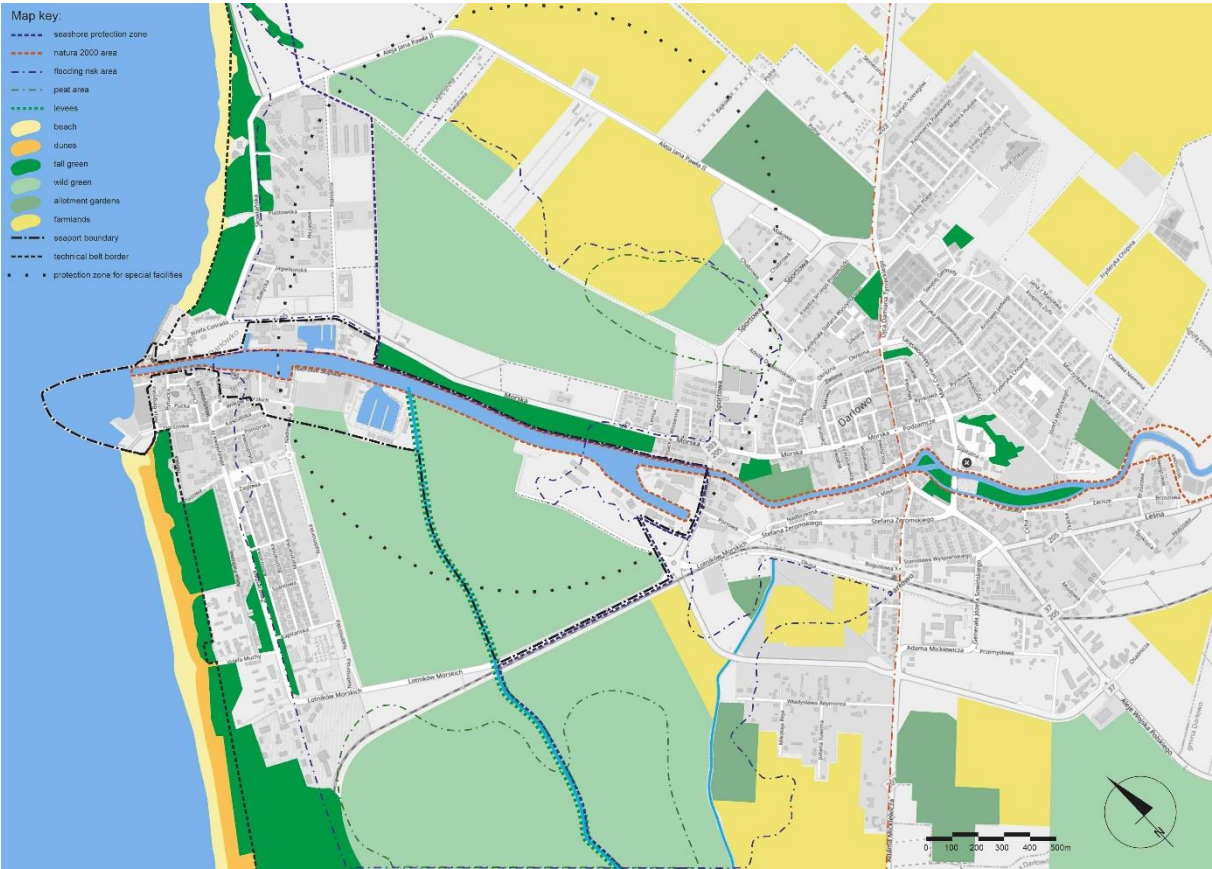


According to Kondracki (1998), the Darłowo commune is located on the border of the region The *Słowiński Coast* and *Sławińska Plains*, which are a component of the *Koszalińskie Seashore*. In terms of aesthetics, the landscape of this commune was classified by Kondracki and Ostrowski (1994) to landscapes of very high and medium value. In literature it is referred to as a lowland landscape.

The local climate is shaped primarily by the influence of the sea masses air. Darłowo’s microclimate is characterized by high sun exposure and air humidity. Due to the iodine and table salt particles present in the air, it is considered to be highly therapeutic for humans. It also determines the presence of halophytes. Darłowo enjoys numerous sites of the *seaside eryngo*, which makes up the biodiversity of the area. Good and very good wind conditions in this area are particularly conducive to cultivation sailing or windsurfing and for the development of wind farms.

The flora present here is the result of climatic conditions, topography, hydrological conditions, existing soils and peat bogs, forest cover, the structure of agricultural land and the degree of anthropogenic transformation. Due to these elements, there are both communities characteristic of the coast and shores of the Baltic Sea, as well as river valleys, and specific to peat bogs, fertile forests specific to river valleys. The consequence of such an arrangement is, inter alia, the fact that the area of the Darłowo commune is probably the richest in the area of the West Pomeranian Voivodeship with due to the numerous positions of the sea holly.

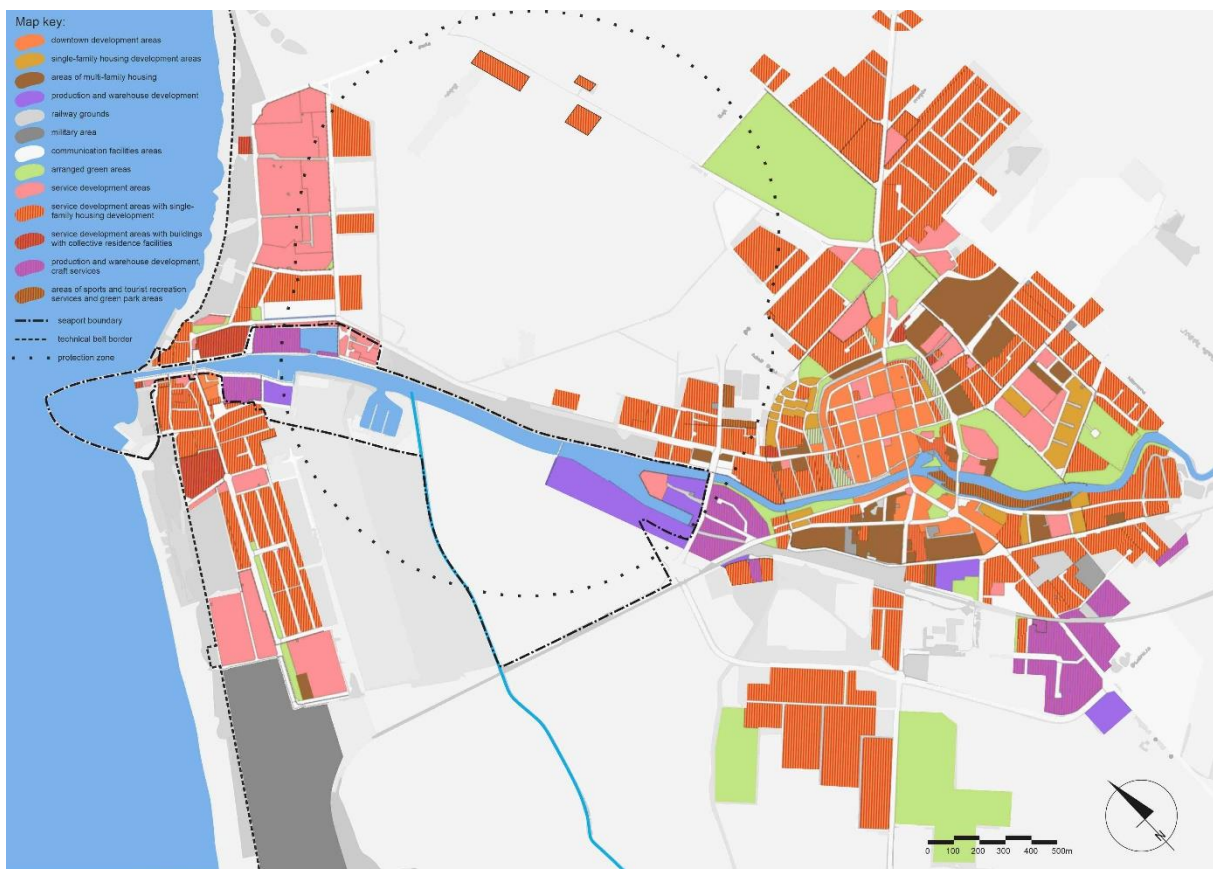
Darłowo commune is an agricultural and forest commune with very good conditions for the development of tourism.



Due to their bio-diversity and landscape values, places such as Darłówko are the target of holiday destinations. Unfortunately, this is an equally attractive area for investments, the intensity of which may harm the value of the area.

Land utilization

The state of development of the area of the city of Darłowo is as follows, which is also presented in the graphic below. The city center forms the Downtown development areas with the Medieval Market Square and adjoining Church and Town Hall. A street and uneven park greenery run around the old town. Generally, in the inland part of the city, single-family housing with few services prevails, concentrated in housing estates within the city. There are two noticeable clusters of areas of multi-family housing. In the western part of the city, industrial areas stretch along the railway line. There are several clusters of services development areas, especially near a large panel estate. On the eastern side of the seaside, services development area in the form of holiday resorts dominates. However, in the center of the seaside and on the west side - single family housing with services development. In the area of the seaport, on both banks of the Wieprza river, there is a concentration of production and warehouses development and craft services. Along the shoreline, on the west side, there are buildings intended for living by those serving the military base of civil aviation.

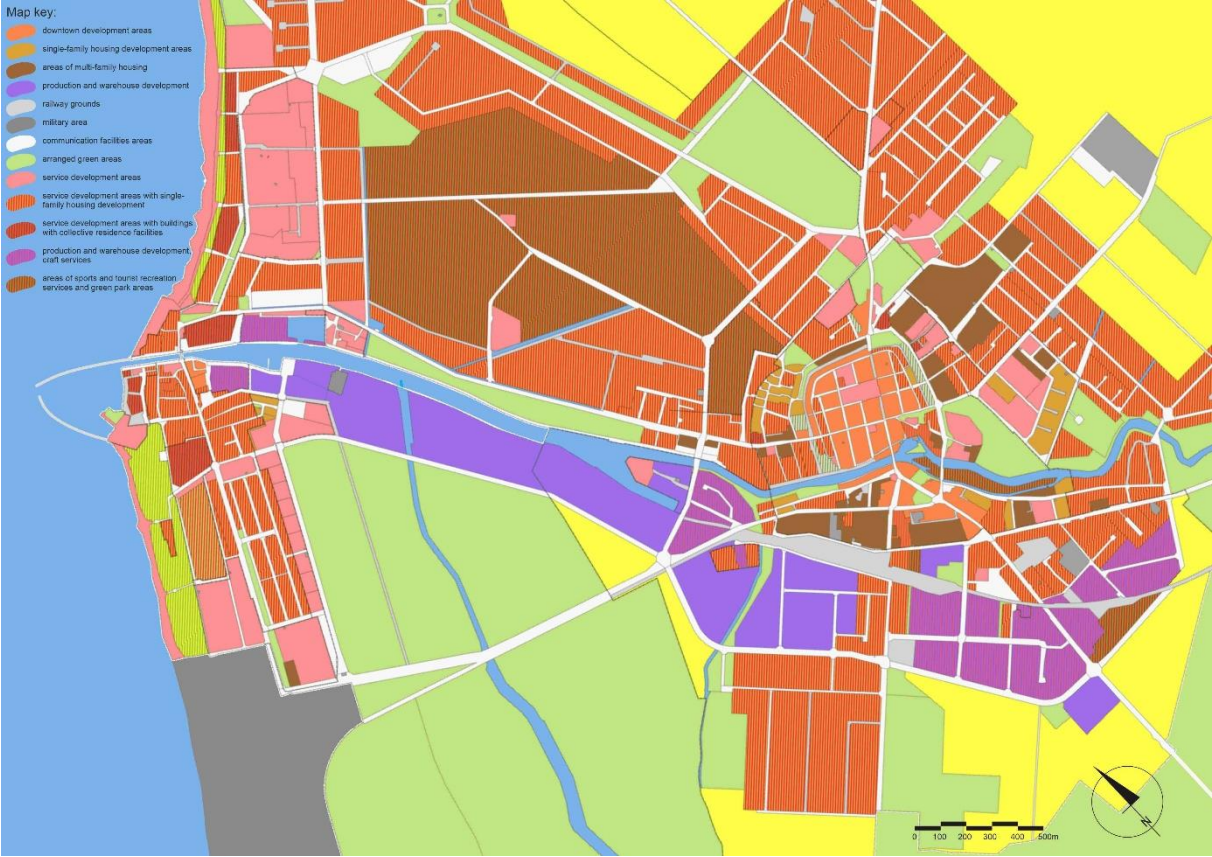


Urban development vision of Darłowo and Darłówko - municipality point of view

The image of Darłowo known from postcards from the last century seems to be forgotten, which can also be read in one of the posts on the fb profile of Arkadiusz Klimowicz, the Mayor of Darłowo. It covers the perspective of 10-15 years and the number of 40 modern hotels, resorts and apartment complexes, curious for the reality of Darłowo. In the photo below, presented on the Mayor's public profile, the areas of the alleged investments are marked. From the field vision and internet query, it is known that in September 2019, 6 apartment buildings are being built in the coastal belt, significantly increasing the supply on the local real estate market. Attractive investments may, of course, create demand, but only up to the level of market saturation. By confronting these data with the provisions in local plans, the vision of the city's expansion becomes clear. Darłowo plans to urbanize the eastern part of the city in the area separating Darłówko and the historical part of Darłowo, also allowing for

investments in the immediate vicinity of the sea. In addition, in September last year, a letter of intent signed by local authorities and significant local entrepreneurs was issued in order to jointly work to create the largest family amusement park on the Baltic Sea with the working name "Darlandia" in northern Poland in Darłowo. Its area would include the area designated in the local plan as area of sport and tourist recreation services and green parks area. Regardless of the credibility of taking this initiative, Darłowo is developing at a rapid pace, and the investments carried out now will fit into its landscape for many decades.

However according to the Central Statistical Office, 20 construction permits were issued in the city of Darłowo in 2018, and 13 were issued the following year. What may be a sign that the presented vision of city development should be approached with a distance.

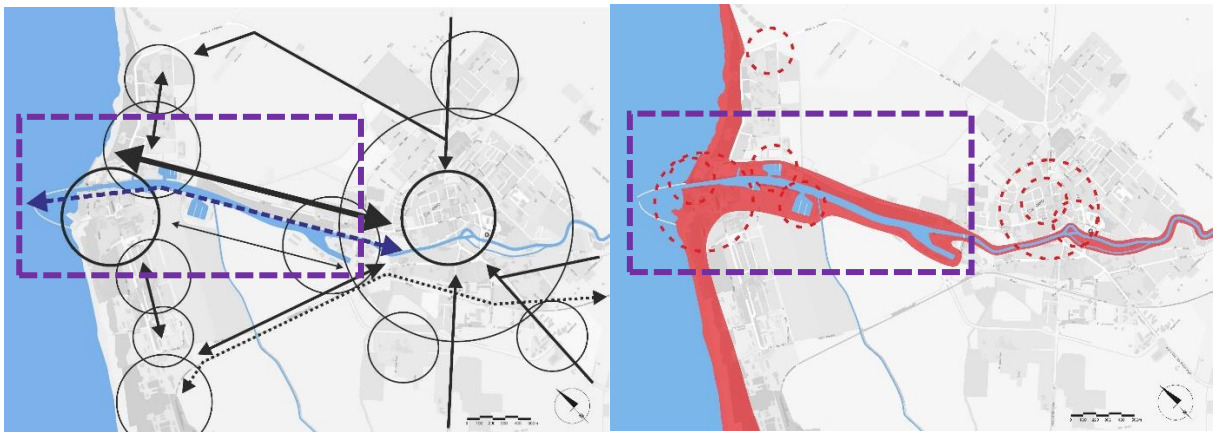


Development vision of the entire urban agglomeration

Inferring from the previous chapter, the first problem from the urban perspective is the lack of a clear spatial structure - this applies both to the system of urban interiors leading the city's audience between the main attractors and the spreading of the urban structure into areas with difficult ground conditions and high landscape values. The second problem is the constant difficulty in communication between the eastern part - considered more attractive due to its good communication with the city - and the western part, recognizable from the development strip of cubic buildings with questionable urban values. These problems should be confronted with the current direction of the city's development as a kind of inertia force.

Selection of the detailed project area

The choice was conducted by selecting the site of greatest importance to the problems of the area.



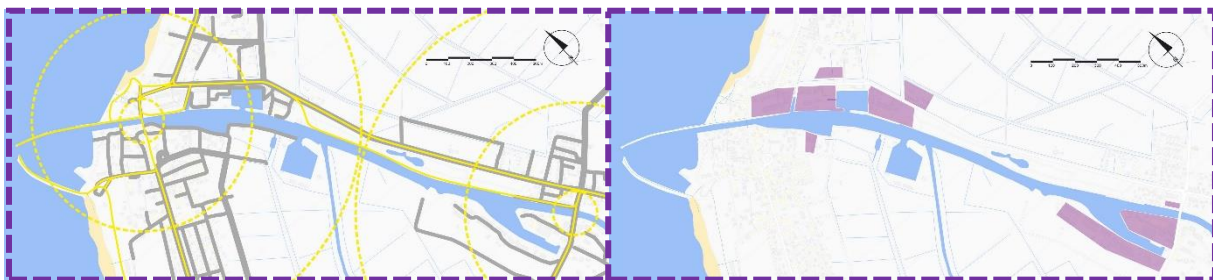
Analyses of the detailed project area

Continuing the analyzes in the selected area, it was decided to focus in particular on a few issues:

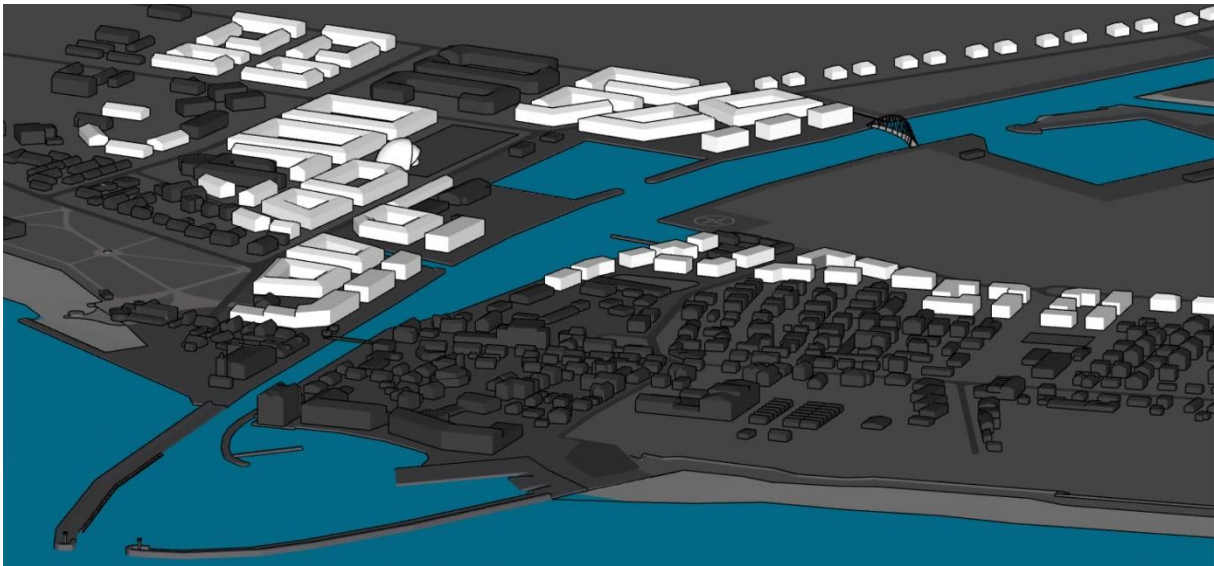
The first thread is the area's communication in terms of the east-west relationship. The analysis of the radii of reaching the Darłówka bridge, the only one in the urbanized area, and the next one, shows a serious problem in communication. The distance of the bridges from each other is over two kilometers, which drastically limits the possibility of using them during one walk.

The second theme is the delimitation of areas of inadequate aesthetics, exposed from the axis of Józefa Conrad Street. The location of such areas in strategic places has a great impact on the reception of the whole Darłówek. These are both demolition sites, industrial areas, surface parking lots, as well as storage areas, or temporary buildings in the form of tin car parks or summer houses.

The third theme is the exhibition of water fronts, particularly interesting in the case of the western wharf, the building line of which ends with the physiographic barrier of the wetlands. This characteristic feature makes the city landscape unique.



PROJECT



Urban development project

The entire urban layout consists of 20 quarters of buildings and 4 main building fronts - especially exposed in the context of the waterfront. The nine quarters are compact, three-story buildings with a gable roof. Their dimensions oscillate between 60-80 meters with courtyards with sides of 30-50 meters. Some of these quarters as well as the urban interiors they create are inspired by the historic urban layout of the city of Darłowo in order to protect the city's identity. An architectural dominant with a public function is planned in the space that forms the main public space - the market square overlooking the marina. This space is located on the axis of Józefa Conrad Street, constituting its culmination and is a key element in the context of Darłówek's perception. The impression of "entrance" is intensified by the contrast treatment of open - closed space. The backbone of the public space is naturally Józef Conrad Street, the direction of pedestrian destinations then turns into a horizontal axis accentuating the directions along the sea. Therefore, the range of buildings along this backbone has service ground floors. In order to provide the residents with intimacy in such a touristic location, private courtyards with family entertainment infrastructure have been designed. Apart from wastelands, parking lots and areas with former industrial functions, there are also gaps in buildings on the border of amorphous single-family houses and quarter buildings, in order to maintain continuity of development. On the eastern side, along Północna street, there are more looser quarters of less intensive development. Mainly intended for residential purposes. In addition, along Józefa Conrad streets, the continuation of single-family houses was located - suburban villas with a small cubature, serviced by a separate road. The building lines exposed from the quays are also of particular importance for the project, they are the building line of the eastern bank of the river, consisting of two parts separated by the marina, and the building line of the west bank, bending towards the land. On the eastern side, the development consists of seven four-story residential and service buildings, the last of which has a cascade form that slopes towards the neighboring buildings. The western part of the complex consists of 22 three-story buildings with a flat roof. Five of them are located directly on the shoreline, they are intended for residential purposes with service ground floors. The next buildings form typical residential quarters with semi-private courtyards. The wall of buildings they create, stretching towards the land, is also of great importance for the aesthetics of the local landscape. It was continued by the development of city villas with medium development intensity of 2-3 storeys. The development project is completed by a 70-meter-long footbridge, connecting the banks of the Wieprza River at the level of the northern abutment of the new marina, closing the communication frame.

Architectural project

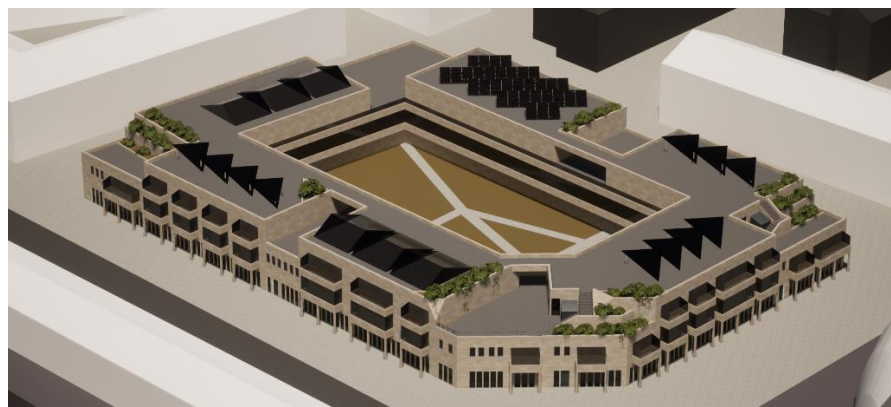
The proposed architecture concerns one of the 20 residential quarters with services on the ground floors. The building has four floors and a usable roof accessible from staircases. The building's communication is served by six separate staircases with separate elevator shafts serving all floors. Two staircases are a typical staircase layout, four more form two two-staircase corridor layouts. Each cage has a smoke exhaust hatch. In a separate communication shaft with staircases and lifts, there is also an installation shaft intended for mechanical ventilation. The ground floor of the building is entirely dedicated to a service function, it consists of 14 premises with separate entrances and back-up facilities. The building has an underground level accessible from Józefa Conrada Street. There is a car park with 92 parking spaces, 3 of which are intended for the disabled. There are also two large technical rooms with ventilation units and installation rooms for connections to the water, sewage and electricity network. There are 98 storage rooms in the underground car park. The first and second floor are entirely intended for residential purposes. They consist of 82 apartments in total. The characteristics of the apartments are as follows:

- 24 four-room apartments with an area of 70-100 sq m.
- 12 two-room apartments with an area of approximately 60 sq m.
- 46 two-room apartments with an area of 30-40 sq m.

Each of the apartments has access to a terrace or an internal loggia. The apartments are accessible from staircases, non-colliding with the service function. In addition, from each of them there is an option to exit to an internal courtyard intended only for local residents, where the infrastructure for family recreation will be established. The building also has a usable roof accessible from staircases and elevator shaft. Skylights with the aesthetics of a sloping roof are also located on the roof, providing an additional source of daylight.

Construction

The structure of the building is realized in a slab-column system in a monolithic reinforced concrete structure. Communication lines have their own structural system. The foundation of the building is a massive foundation slab forming a so-called bathtub with additional waterproofing protection. The inner courtyard is located on a separate reinforced concrete slab in the green flat roof structure with an inverted arrangement of layers. It is supported by 18 reinforced concrete pillars and perimeter based on the walls of the building structure. The ground floor or the floors of the building are divided by one longitudinal internal structural wall and partition walls with increased acoustic insulation. The flat roof of the building with a reinforced concrete structure is adapted to low-intensity vegetation processes. Entrances from staircases to the roof are covered with orangery structures with an aluminum frame. There is also a technical infrastructure in the form of a ventilation duct within the conservatory.



Reference list

1. Lorens P., Obszary poportowe – problemy rewitalizacji. Szczecin: Fundacja Instytut Studiów Regionalnych (2013).
2. Lorens P. and Martyniuk-Pęczek J. Problemy kształtowania przestrzeni publicznej. Gdańsk: Urbanista (2010).
3. Lorens P. and Martyniuk-Pęczek J. Zarządzanie rozwojem przestrzennym miast. Gdańsk: Urbanista (2010).
4. Krośnicka K., Renewal of small port cities on Polish and German Baltic coast. Prace Wydziału Nawigacyjnego Akademii Morskiej w Gdyni, 24, 51-64 (2010).
5. Magdziak-Grabowska M., The new character of harbor area. Technical Transactions: Architecture, 12, 293-297 (2013).
6. Nyka L., Architektura i woda – przekraczanie granic. Gdańsk: Wydawnictwo Politechniki Gdańskiej (2013).
7. Nyka L. and Burda I., Scenario-planning solutions for waterfront flood-prone areas. Global Journal of Engineering Education (2020).
8. Rembarz K., Yacht Port as a Specific Type of Development of the Urban Water Area. Biuletyn KPZK PAN, 276, 71-86 (2019).
9. Kochanowski M., Miasto i port. Relacje historyczne i współczesne jako problem strategii rozwoju miasta. Biuletyn KPZK PAN, Zeszyt 186 (1999).
10. Gehl J., Miasto dla ludzi. Kraków: RAM (2014).
11. Hein C., Port Cities and Urban Waterfronts: How Localized Planning Ignores Water as a Connector. WIREs water (2016).
12. Wejchert K., Elementy kompozycji urbanistycznej. Arkady (2010).

Other:

Statystyczne Vademecum Samorządowca. Urząd Statystyczny Szczecin 2020.

Rocznik Statystyczny Gospodarki Morskiej. Urząd Statystyczny Szczecin 2020.

Ustawa z 20 grudnia 1996 r. o portach i przystaniach morskich, DzU 1997 nr 9 poz. 44.

<https://www.port.darlowo.pl> (01.10.2021)

<https://stat.gov.pl> (01.10.2021)

<https://www.google.pl/intl/pl/earth> (01.10.2021)