

The Puck harbour – a new national challenge

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Abstract

One of the oldest Polish harbours – Puck harbour – has experienced in its development a lot of changes connected with the adaptation of its own main functions to the requirements of succeeding periods of history. Its geographical location, far inside the sheltered Puck Bay (Sinus Bautzensis) has existed from the beginning of the early Middle Ages, where it was a harbour and base for local fishermen. This function as a harbour prevailed through many ages, as found in archaeological studies showing the oldest Puck harbour dating from VIth – Xth century where it covered an area of 12 ha. Today, much of the original parts are under water at a depth of 1,5–4,4 m. Erected at a later time and southwards from the Middle Age Harbour, the fishing port exists till this day although several modernizations have been made. Apart from the fishing port functions we can distinguish several others important stages in the development of the city. A little later in the Middle Ages the Puck harbour played a role as a commercial port, with cargo handling and the exportation of wood and agricultural products.

The proximity of the big harbour in Gdansk caused the influential inhabitants of Gdansk to repeatedly block the Puck harbour development and, in particular, confined its commercial functions. The pride of Puck harbour was the repeated honourable role of being the main base of the Polish Navy. In the years 1517–1522 the privateer (kaper) ships based in Puck, the nucleus of the Polish fleet, provided the king's safe conduct. In 1567 the king Zygmunt August moved to Puck, the main maritime base, where the new privateer fleet's ships were built. This project was continued also by king Wladyslaw IV, who strengthened the fortifications and organized the Polish fleet. The next time that Puck became the main Polish fleet base was in the period 1920–1926 when ships and hydroplanes were stationed there. In 1926, after the transition of the main fleet base to Gdynia, the Maritime Wing remained in Puck until 1939, which had at its disposal several small basins with land subsidiaries and a few different types of hydroplanes. From 1960 Puck started to develop its function as a sailing base, which nowadays dominates its activities and the new port for sport yachts was created. Research has shown that the location of Puck harbour has changed over past years, with its location having moved from the estuary of Plutnica more and more into a south easterly direction, but there is still room for many floating units. The newest, evolutionary plans for Puck harbour indicate its early transformation into a large marina with the aim of providing adequate sports and recreation sailing facilities. In this latter function we can foresee new sailing problems.

Keywords: historic port, sailing history, harbour development.



1 A bit of history

The function of Puck as a haven and port in the vicinity was already described in the early Middle Ages, but some evidence shows its much earlier existence as a centre for trade and fishing. The underwater discovery in 1977 of the remains of the colony and harbour and the subsequent research that followed, brought closer the facts about the building and function of the center. Although the archaeological work and study of the settlement is still being conducted, some of the scientists' conclusions are already known. It appears that standing parts of submerged piers, boats and other elements date from the VIth – Xth century – Pomian [1]. The significance of this haven grew from its existence as a calm location inside Puck Bay, screened from the open sea by line of islands with several channels used by boats and ships, which navigated with goods from Puck. There is also an opinion that navigation among islands of today's peninsula was negated because of shoals. Preserved chards of the Puck Bay from XVIIInd century confirmed the existence of belts among islands what inclines the author to the first version. To protect the area from Swedish ships, two forts in Wladyslawowo and Kazimierzowo were built in 1634. They existed until 1644 when they lost their importance and it resulted in the destruction of these strategic fortifications and no sign of them remained – Groth [2]. In time, all the islands united into the Peninsula Hel and the way from the open see to Puck harbour lengthened because sailing on the new route they had to obviate the point of the peninsula and numerous shoals on the way to port. Oscillation of the sea level had also influenced the configuration of the land in the bay area.

The name of Puck was mentioned for the first time in the documents of Swietopelek who was the Pomeranian Governor in 1220. The same name was used by the first Puck Castellan – Scibor in 1273 and was written in documents of Cysters from Oliwa – Groth [2]. Since that time the village and region has experienced many changes caused by local initiatives and decisions, which were taken by invaders. The industrial development of the port and region appeared in the years of the Teutonic Order reign when in 1348 the municipal rights were established, and in 1368 the Fishing Inspection Office was created.

The role of the town increased by becoming the administration center of the Teutonic Order. In the following years the defense functions were developed and firstly the small, and then the bigger castle were built.

In a very complicated history of the Puck region and the whole Polish statehood we can distinguish several difficult periods connected with invasions, attacks and annexations not only by the Teutonic Order but also by Danes, Swedes, Russians and Prussians. The Puck Land through many years stayed under Teutonic Order, Swedish and Prussian occupation. Numerous signs of invaders activity can be seen therefore in the development of some elements of the city and region.

The dates given below show the complexity of existence for inhabitants of this area.

1310 – 1466	- reign of Teutonic Order;
1571	- invasion of Danish ships;



- 1626 – 1627 and 1703 – 1704 - Puck in Swedes hands;
- 1704 – 1706 - invasion of Russian troops;
- 1772 – 1918 - Puck is included to Prussian and German States;
- 1918 - Poland regained independence;
- 1939 – 1945 - German occupation.

If we add to these periods the stormy days of the two world wars, then we have the full picture of difficulties which were experienced by inhabitants of the Puck area. In this background, the facts of building and development of Puck harbour and transformation of navigation in the Puck Bay area will be shown.

2 Haven and fishing port

The development of navigation and the operation of a port in this place was possible thanks to its geographical location, and the possibility of acting as a broker between Gdansk merchants and the recipients of goods from the Pomeranian region. The lack of a convenient connection on country roads limited the freedom of goods exchange with other regions of the State. Therefore, Puck harbour confined itself as a base for local fishermen and a reloading point for wood and agriculture products which were exported to the West Baltic region. Apart from the medieval port, which was flooded after a rise in sea level, the fishing haven existed here for many years. Archival documents show the haven as a stony dike with trapezium profile strengthened by a palisade. Several boats and cutters of local fishermen were based there. The fishing harbour was built in this place in the XVIIInd century – State Archives in Gdansk [3]. The existing dike was used for creating the right part of the harbour, which was considerably extended. Later the left part of the quay and harbour was created. The harbour quay had slantingly heaped edges terminated with stony reinforcement and fender bars, which made mooring easier. The harbour obtained a rectangular configuration with the open side to the North. Not only boats and fishing cutters called at the harbour but also some sea ships which transported goods, mainly wood, to Western Europe. Investigations show that in 1627 – 1648 dozens of fishing boats and a similar number of sea barges were in Puck (Groth [2]). Placed deep inside the bay and among many shoals the Puck harbour needed constant solicitude about the proper depth of the water lane and the depth inside the harbour. Seasonally, the port and water lanes deepened and the reports were sent to the local authority. The depth in the harbour was 2–2,5 m and a little bit deeper on the fairways. Notes of systematic measurements of depth since 1880 remained in archival documents.

The Puck harbour was modernized several times, mainly because of the collapse of quays, which from the beginning were built as a dike strengthened by a wooden palisade. In the following years of exploitation of the harbour, the quays were strengthened by a tight wooden wall with an adjoining layer of stones and a hardened surface for communication and reloading tracks.

Preserved archival documents show the development of the harbour and profiles of quays, which were done in succeeding modifications. Practically to the late 1930s of the XXth century, the quays had a girt construction with a front

wooden wall, which was braced to beams or to wooden buffer stops. Oblique fender beams and slant descent to surface of water of the stony fortifications assured good load capacity of the quays.

Reconditioning of the basin in the period of 1936 – 1937 was done according to the technology which availed cementation of the fragment above the tight wall but still the wooden quays in total of 160 m remained oblique. Dimensions of the harbour basin were 40 x 60 m and a surface of 0,24 ha. The depth inside the basin was about 3 m.

The present shape of the harbour and construction of quays, which are perpendicular to the water surface, were done in the 1970s. Repair work was commissioned by Urząd Morski (Marine Board) in Gdynia in 1973. The reconstructed harbour basin consists of: East quay (69,0 m), West quay (75,4 m) and South quay (37,0 m.). The wharfs have a construction of plate – ferroconcrete with front Larsen tight wall and beams. The previous wooden tight wall and wooden beams from 1936 – 1937 were kept.

Speaking about boats and barges from the period of the XVIIInd – XIXth century, it is said that their construction was based on the experience of local boatbuilders and the models of Pomeranian and Scandinavian boats. They were built in planker works or simply on the shore of the bay near windlasses. Oak wood was used for construction of boats, which was sea water resistant. The length of fishing boats was 4 – 9 m and the length of barges was anywhere from ten to twenty meters. The barges with the length of 25 m could transport 60 tones of goods or 30 cubic meters of sand, gravel or other goods. For centuries, barges from Puck Bay transported goods in the area of the bay and the Baltic Sea. The last barges (10 units) were registered in Rewa and after regaining independence they were used for transportation materials for building Gdynia harbour (1922 – 1936) and the airfield Hexengrund (1942 – 1944). One of the last units of this type - “Helena” from Rewa with a length of 25 m. sunk in 1945 because of hostilities (Krzysztof [4]).

3 Airfield and harbour basins of hydroplanes

In the first years of development of maritime aviation, in the period just before the IWW, Germans planned and built the base and port for hydroplanes, northwards from Puck. In the period 1911 – 1913 the research station of Kiser Navy was built here for the first tests of this type of unit.

In 1910 a group of German Navy officers came to this area and they were walking through wet meadows and flood waters of the Plutnica River in the North outskirts of the city. It was the commission, which evaluated this area for the building of an experimental center for maritime aviation. The works connected with the building of the airfield went very smoothly. Buildings were erected, the slipway and concrete flying strip with a length about 800 m were built, and for the needs of transportation of airplanes on the wet meadows, drain pipes were laid and a pumping station was put in motion. In the autumn of 1911 the first airplane, Fritsche – Rumpler was brought, then it was equipped with float gear and it was tested. In the spring on 3rd May 1912 the first pilot, who

took off from ground in an Albatros D2, happily landed on water and in July that year the Albatros D3 took off from the surface of the water for the first time. On 1st July 1913 the “Erste Marine Flieger Abteilung” was created with a personnel of 100 officers and privates, and from that year the Friedrichshafen Company started production of the maritime airplanes, it was a one engine biplane with two float gears, but slightly changed models were produced during the whole IWW. Most of the combat flights against the Russian fleet (some of them even to Finland) were done on fighter hydroplanes type “Albatros W – IV” (Olejko [5]).

After regaining independence, the Polish Navy started its development and the command decided to take over the Puck hydroplane base and to create in this place its own aviation unit. Initially the unit was called Baza Lotnictwa Morskiego (Maritime Aviation Base) and from 1923 – Morski Dywizjon Lotniczy (MDLot.) (Maritime Aviation Wing). In 1920 in Puck the Fleet Command was established for 6 years, which strengthened the functioning of the authority and reanimated economy. So, the Navy had a definite influence on the development of the city at that time.

MDLot. took over the premises of the German research station and organized the hydroplanes airfield and the maintenance base. The net of small basins for hydroplanes (at the beginning formerly belonging to the Germanys - Friedrichshafen) were developed, they were taken from hangars then launched on water with the aim of later take off from the surface of the water. The units for supporting flights were based there also. We are talking about a harbour for hydroplanes which consists of five small basins as a separate part of the Puck harbour. All these basins were created together with the airfield. Initially, in 1912 there were only two basins which allowed launching on water of the hydroplanes. In the course of time the new basins were created because of the growing number of airplanes and supporting units.

4 Marina

Discussion on the conversion of the Puck harbour into a marina started in the 1960s, when buildings of Marine Scout's Center near the old fishing port were built. The harbour was becoming too small for the organization of regattas, which was proved at the first regatta in class “Slonka” in 1961. Projects and plans on enlargement of the base for sport units were taken into consideration, predicting considerable growth of interest in sailing in the Puck area. There were predictions about the growing needs for mooring places and the growing number of units that will be permanently based in the harbour and in the back-up facilities. Although all these expectations did not come true very fast; in the end all conceptions on the development of Puck appeared right.

The first conception of the building of a marina was created by order of Powiatowy Ośrodek Sportu Turystyki i Wypoczynku w Pucku (District Center for Sport Tourism and Repose in Puck) in June 1975. Complying with the early techno-economic assumptions, the hydrotechnic part of the harbour had to find room for 96 units of different sizes. The total length of the mooring line should



have been 570 m. The project foresaw construction of buildings with a total space of 1400 sq m where necessary rooms, warehouses and workshops should be placed.

The projected buildings had to be placed to the right from the Marine Scout's Center (HOM), however the marina had to be situated to the North-East from the old fishing port. The new area of the projected marine was supposed to be created during dredging of the basins and silting up of the part of the beach and the eastern quay, where also some objects were planned to be built. The new harbour had to be equipped with an outer breakwater – North and West, and from East the quay had to be considerably extended. Inside the harbour were the fishing port and three new mooring platforms which created new basins. Unfortunately this brave project was not accomplished.

The present marina in Puck was created step by step in the years 1985 – 1995 nearby to the walking pier. Its outer breakwater erected in the distance about 100 m eastward from the pier – as a first element closing the harbour in the shape of the U letter. With time, additional quays and floating platforms were created at which many yachts and motor boats were mooring. The port, or truly speaking, the marina, is a base for the organization of numerous regatta events at European and World level. Here, in the summer time, many training camps and different type of regattas were concentrated. These events brought a glory to the city and gave a profit to the inhabitants in different sectors (hotel trade, souvenir, catering business etc.).

The shielded water region of the marina has not always ensured a peaceful stopping place for yachts. The fierce North winds have very often swelled the waves inside the marina. That's why the new project of the protecting breakwater from the North of the water area of the harbour was created.

The project predicted that seven segments of floating breakwater would be connected as a whole. In spite of negative opinions of specialists the breakwater was build and it was tied rod to concrete anchors in 2002. The investment executor – Technology Industry S.A. – ensured the solidity of realization of segments of the floating breakwater and the steel nests of anchor chains on Swedish licence. All calculations sounded very optimistic.

Investors' and executors' optimism disappeared just after the first strike of an impetuous, squally wind from the North in 30 March 2003. Several segments of the floating breakwater construction were blown off from the heavy anchors and almost completely destroyed.

The rest of the three segments survived only until the following seasons. The entire annihilation of the floating breakwater took place in spring 2006 under the pressure of a thick ice-floe. The last chains cracked and elements of the breakwaters landed in the harbour and its vicinity. Nature finished the destruction of this ambitious investment, which was supposed to be developed in the direction of the fishing port and create a spacious and large marina with modern solutions.

Investors were trying to execute the assurances of guarantee of Technology Industry S.A., but the obstacle was the lack of a partner after these events. The company collapsed and the manager of the remains was not able to fulfil the



assurances of guarantee. The work of drawing out anchors and chains of the breakwater was executed in summer 2006. The establishment of a new breakwater with a reliable solid construction is planned. What appears from that means that the plans of building of a large Puck marina are moving away but this does not deprive sailors of the possibility of thinking out new visions and plans.

5 Puck Marina – development plans

The final conception of a large Puck marina, which spreads from the fishing port to the yacht port was prepared at the end of the 1990s, before building of the first floating breakwater. Two variants of the project foresaw nautical and logistic installations on a large area near the harbour and beach. The first of the variants was classical with rectangular basins, the second one proposed oval basins, which made the marina very modern. In both variants the author foresaw not only the mooring places for different type of yachts, but also boat hangars, parking spaces, zones for windsurfing with a base, shopping and a service center and a modern hotel base. The business plan of the marina, which was presented to the authority of the city in 2003, showed the possibility of regional economic development relied on the existing base of resources. The assumptions are ready and the time has come to look for funds for realization of the project. Therefore, all remain in the hands of the city's authority.

One of the other conceptions is a marina and recreation center placed on a floating island far away from the city on the Puck Bay waters. The island is planned to be anchored on the Puck Bay waters, which means that the access to

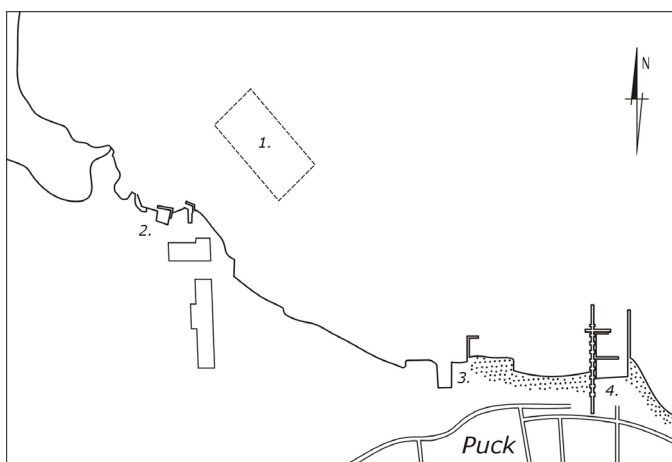


Figure 1: The Puck harbours today. (1. Old harbour remains from VIth-Xth century; 2. Airfield and harbours basins of hydroplanes; 3. Haven and fishing port from XVIIInd century; 4. Marina.)

it will be only on the water way. Similar conceptions were already realized in different places in the world and the comfortable equipment of the hotel and recreation base encourages others to follow the idea. Maybe, in a short period of time, we will witness the realization of this brave idea.

6 Conclusions

Problems of creation, development, and transformation in the scope of destination of the Puck harbours, which were described above, show the decision to place the improvements in this exact spot to be correct. Through the ages the harbour was the base for local fishermen, the place for reloading goods, a base for the navy and at the end, a base for yachts. Despite the location of the harbour deep inside the shallow bay, all the boats approached the harbor on the laid out water lane, which needed and still needs to be dredged periodically and requires good navigational aids.

Despite any stumbling blocks, we have to look at the new navigational and exploitation problems and the future of the Puck harbour with great optimism.

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