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Buildings from the 18th and 19th century on the main rampart of Prussia Fort in Nysa

Introduction

Prussia Fort, which was built in order to perform a defensive and frightening function, severe in its military form, has become patinated and even romantic in character. Despite the fact that the sun, water and plants deformed its historical shape to a considerable extent, it still inspires admiration and interest for its creators. On the one hand, we would like to see nowadays fortification works, counterguards and the moat in their original forms or to experience the staging of a historical battle which would take place on the reconstructed ramparts of the Fortress. On the other hand, the fortress which is covered with invasive plants attracts us with its mystery and has become not only a place of relaxation but also a place where we can have contact with history and nature. In the works concerning the revitalization of the complexes, a key meaning, particularly in the first stage, is constituted by a proper land development of green areas. Trees and bushes most often grow spontaneously in the majority of the fortress area. Their roots not only destroy walls but they also stabilize constructions. The most significant tasks to be performed by architects of landscaping design are as follows: emphasis on historical elements, liquidation of invasive plants which destroy the form of fortification works, the choice of valuable units with regard to landscape and quality, the assessment of the functioning ecosystem, the project of designing green areas in an attractive way with regard to the space. This is a really significant stage along with typical architectonic and building preservation works which are carried out parallel and require large financial expenses in order to restore the glamour of the past of those magnificent fortresses.

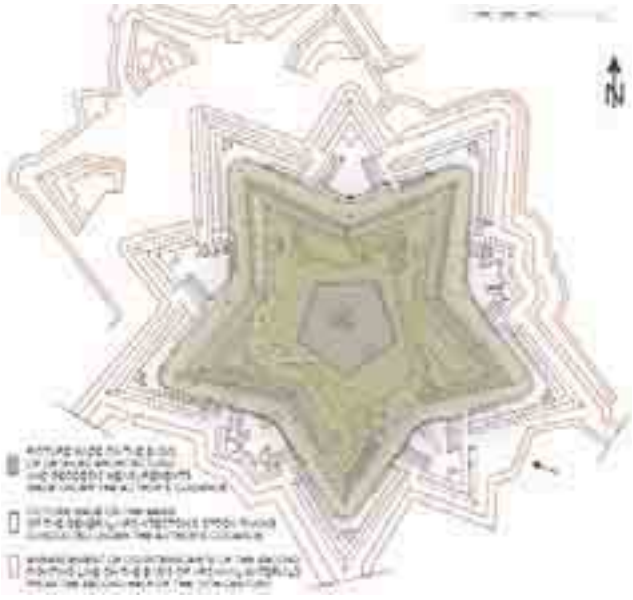

Fig. 1. Outline of Prussia Fort (drawn by the author according to his own examinations)

Location and a general historical outline of Prussia Fort

The resources of fortification monuments in Nysa constitute a cross section of fortification buildings from different periods of time. We can find there fragments of Mediaeval town walls and two gatehouses as well as the remnants of 17th-century ramparts in the territory of the town green areas originating from the period of classical fortresses and the well preserved Bastion of St. Jadwiga. The period of main fortresses constitute the High Ramparts, Outer and Inner Jerusalem fortifications, Prussia Fort and Bombardier Fort, which were built in the second half of the 18th century. At that time, the fort

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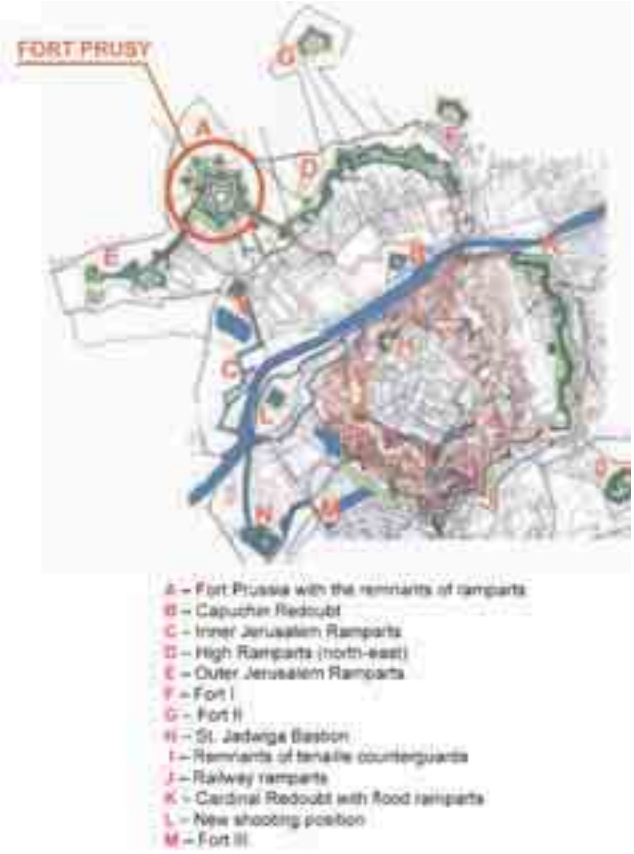

Fig. 2. Nysa fortifications (elaborated by the author)

existed in the form of a fortified camp and represented the most modern achievements of the fortification ideas. The objects of a centralized fortified system in the form of the Blok-hauzschanze Fort, railway fortifications and objects in the foreground – artillery forts I, II and III originate in the 19th century, the period of fortified areas.

Prussia Fort, which constitutes the subject of this elaboration, is situated in the north of Nysa on the left bank of the river Nysa Kłodzka; one can get there from Kilińskiego Street along Obrońców Tobruku Street. The center of foundation constitutes the star with five points which is surrounded by the main dry moat. Behind it, there is a ring of fortification works and counterguards. Outside, there is the other dry moat with a rampart and a hidden road which is preserved only in fragments. In the north in front of Pomorze fortification works there are the remnants of Diericke shooting positions. In the southern part there are two connecting ramparts in the direction of Bombardier fort and Outer Jerusalem Ramparts.

During the Silesian War II in 1741 – after the siege of Nysa which belonged to Austria at that time and which lasted almost a year – the Prussian army under the command of Frederic II the Great conquered the fortress. Neither the ring of fortifications around the town, which was built according to the Dutch and New-Italian school in the 17th and 18th century nor the determination of defenders helped. By virtue of the treaty concluded in 1742 in Wrocław, Silesia went under the governance of Prussia. Frederic II began to build a fortification complex on the left bank of the river fortifying strategically significant slopes according to the Old-Prussian school. The following fortifications were built: Outer and Inner High Jerusalem ramparts and the redoubt of the fortress – Prussia Fort.

In 1743 building of the redoubt started. Frederic II personally supervised the works and the major architect of these fortifications was major-general Gerhard Cornelius de Walrave. This distinguished engineer, who came from the Netherlands, was undoubtedly the pillar of Prussian fortification art in the middle of the 18th century; in particular, he developed the system of ixodic counterguards which was called the star-like system. It is worth recalling that the Polish King August II was also a theoretician of ixodic systems. The fort finally had the shape of a star with five points although the first plans concerned an outline of a six-point star. After all, building of the central star was completed in 1745 (in spite of the year 1744 shown on the building of the fortress' well) and then the fort was rebuilt and modernized numerous times until the 80s of the 19th century.

The fortress was besieged twice during Silesian War III and it was conquered in 1807 by the French army after Prussia joined the anti-French coalition IV. After less than two years the fort came back under the governance of Prussia. In the years 1859–1869 it functioned as soldiers' barracks, whereas in the years 1864–1866 and 1870–1871 there was a POW camp. Since the year 1914, soldiers' equipment was stored in the territory of the fort, while in the 30s there was a shooting range for small-caliber weapon and a storehouse for ammunition [3].

State of examinations of the object

Project workshops with the participation of students, of the Landscape Architecture of the Natural Sciences University in Wrocław, conducted by the author and organized in cooperation with the Society of Friends of the Nysa Fortifications and the Town Council of Nysa took place in May 2004. During these workshops, a draft listing of plants in Prussia Fort was prepared and also the reconstruction design concepts of reconstructing fortification works and counterguards. In the autumn of 2004, within the scope of design classes, students of Landscape Architecture under the guidance of the author prepared architectonic listing of several shelters in the crown of the citadel. The works were continued in May 2005 during design and cataloguing of 3th year students of Landscape Architecture practice. Listing of the remaining shelters and plants in the crown of the central star was also made at the same time.

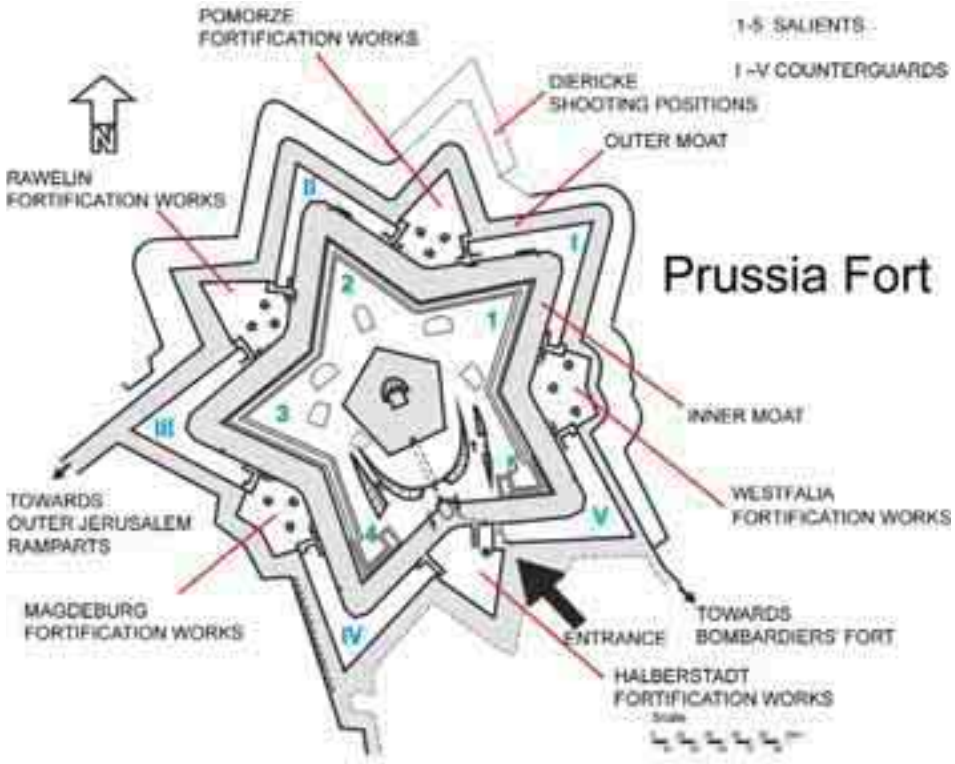

Fig. 3. Elements of Prussia Fort

Architectonic values and the present condition

The tenaille system developed parallel with the bastion system but the latter dominated the realization of fortifications in the 17th and 18th century. The origins of the tenaille system are found in the research works of Francesco Martini (1495) and then developed by Ludwik Landsberg in 1712. The best research work concerning this subject is a study of general Marc Montalembert entitled *Perpendicular Fortification* published in 1787 in Paris.

Several tenaille foundations in the form of a star made mainly by general Warlave are situated in Silesia. These are the following forts: Głogów, Kłodzko, Nysa and Świdnica; in Koźle and Skorogoszcz there are preattempts of such solutions. In comparison to other forts, Nysa deserves a special position. A good technical condition, legibility of its original foundation and preservation of the whole arrangement of the 18th century left-bank fortifications, the year of foundation and finally the name of its designer decide on this position [2].

In the central part of Prussia Fort there are ten small shelter buildings having different purposes; they were built during the construction of the fort and later during the successive modernizations of the fort. These are two objects from the 18th century: the well and the guards shelter (SS) which was located in the middle of the courtyard market and a half-caponier (PK) which was built into the salient of the neck tenaille.

Among shelter buildings situated in the crown of the main rampart, probably in the 19th century, the first two underpasses, i.e. shelters of vertical communication with main casemates of the underground shelter called 'podwalnia' at the foot of the ramparts were built. The arrangement of the cornice on the neck elevation and the condition of bricks preservation differentiate them from other buildings. During the following years, an ammunition laboratory, a guardhouse and an ammunition storehouse were built. The form of the main ramparts and the objects which were situated on them until 1865 is still not fully clear and requires thorough studies of archives. The basic rebuilding took place in the years 1865–1888 during which the main rampart was made higher, the land form between positions was changed, two couch-house shelters, the caponier and gateways were rebuilt and finally an ammunition laboratory was also rebuilt (it was made shallower, the roof was strengthened by means of granite and concrete layer), which changed its function and became a neck guard house [1].

Fig. 4. Present condition of green areas in the territory of Prussia Fort. (photo: J. Potyrała)

Buildings from the 18th century in the territory of the fort

The well and guardhouse shelter (SS)

Dimensions

The total area of inner parts – 58 m^2, cubature – 1026 m^3. Height 340 cm. Thickness of the earth layer is about 120 cm.

Material: brick.

The objects consist of three rooms which have barrel vaults. Two southern rooms are rooms of guards; the northern one has the fort well. The inscriptions: the initial of Fryderyk II and the date 1774 are built into the gable wall. Inner parts are covered with plaster and they are dank; the floor is made of bricks and cement; there is no window or door woodwork (only the eastern gate is preserved, interwar period). Brick wall faces have numerous cracks, losses of bricks, washout joints, a lot of moss and lichen.

Green areas

There is a flat terrain around the building of the fort well, which is covered with low flora, concentrations of trees – mainly seedlings of a maple-tree (*Acer plantanoides*) and elder (*Sambucus nigra*) as well as nettle (*Urtica dioica*) and two-year hawk's beard (*Crepis biennis*). In some places on the walls there are species of climbing plants such as grapevine (*Vitis vinifera*) or ivy (*Hedera helix*). The very building of the fort well – mainly the earth layer which covers it from the northern side – is also densely covered with bushes such as elder (*Sambucus nigra*), plicate blackberry (*Rubus plicatus*), two-year hawk's beard (*Creppis bennis*) and also young seedlings of maple-tree and oak. The are various species of grass.

Half-caponier (PK)

Dimensions

Width of the neck wall – 361 cm, height – 300 cm, thickness of the interior – 120 cm. Thickness of the earth layer is about 120 cm. The total area of the interior – 35.4 m^2, cubature – 154.9 m^3.

Material: stone and brick.

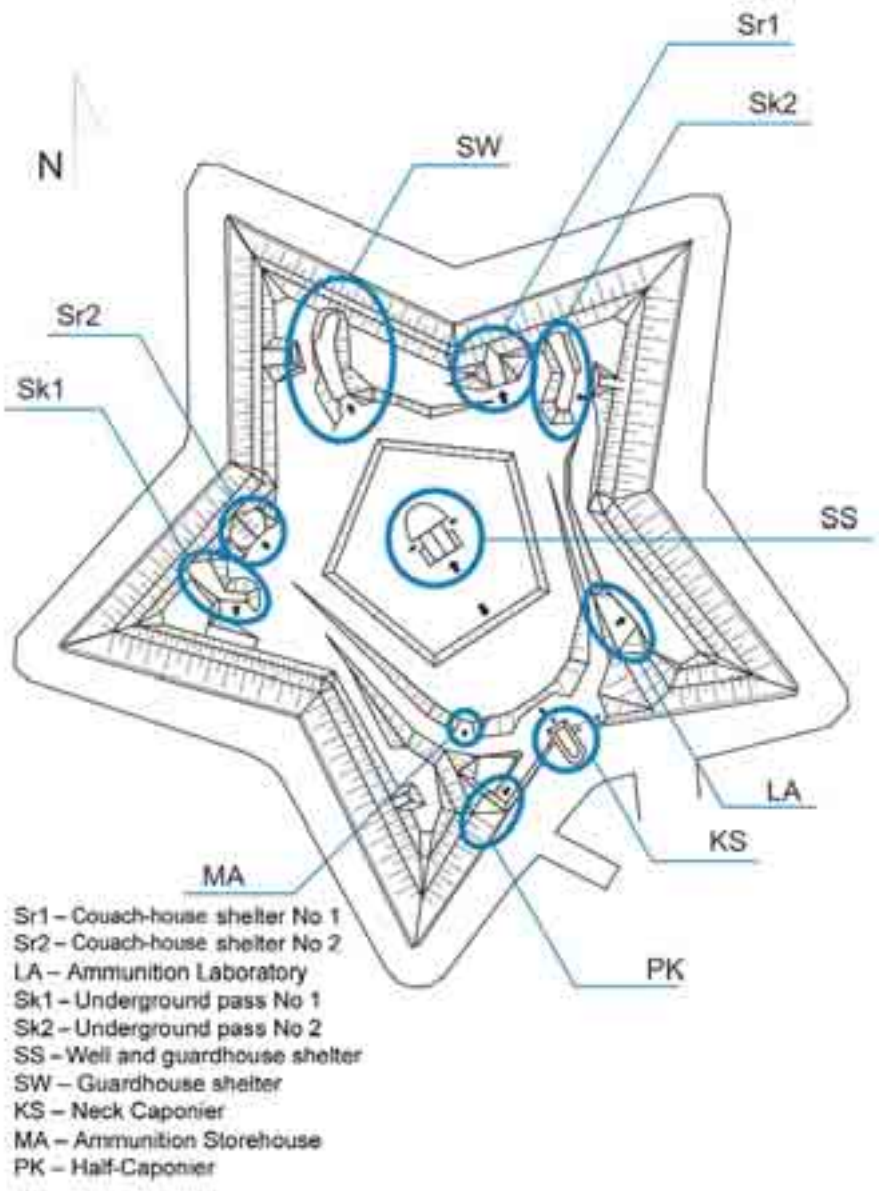

Fig. 5. Location of shelters in the territory of the main fort rampart (drawn by the J. Potyrała)

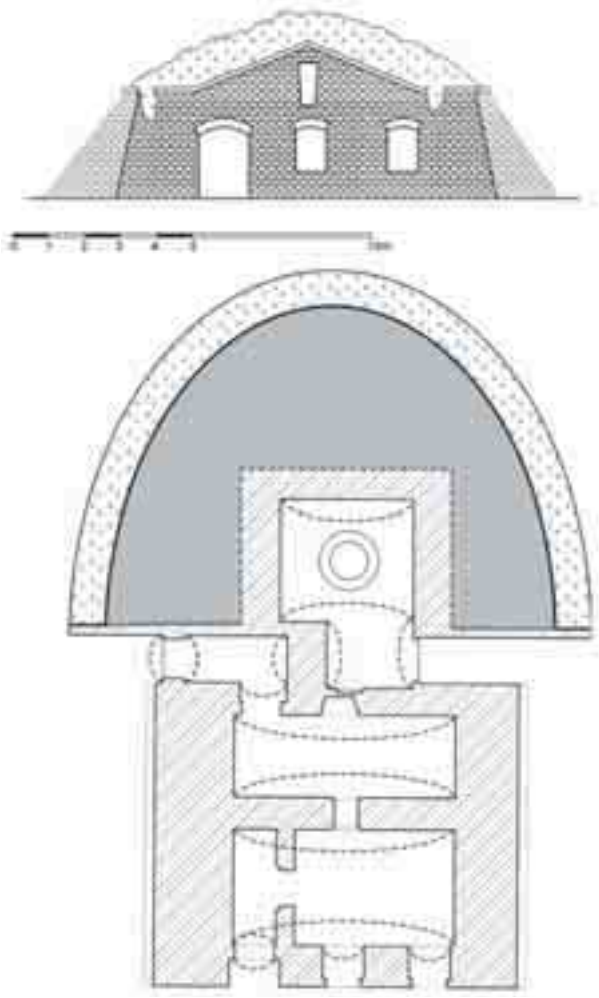

Fig. 6. The well and guard shelter – SS (drawn by the author)

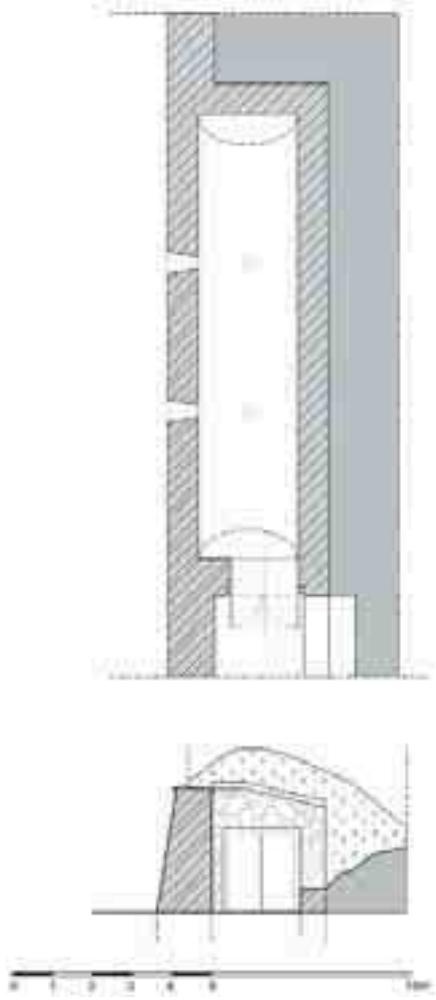

Fig. 7. Half-caponier – PK (drawn by the author)

One-room interior with a barrel vault and a floor made of brick. There are two walled up shooting ranges in the southern wall. There are two ventilating holes on the vault axis and a well preserved wooden double door from a later period. The condition of walls is good and the interior is dry.

Green areas

The area around the salient No. IV is covered with trees and bushes of middle height; maple-tree (*Acer plantanoides*) and ash-tree (*Fraxinus exelsior*) dominate there. There are thick concentrations of those plants together with such species as elder (*Sambucus nigra*), mountain elm (*Ulmus glabra*) and wide-leaved linden (*Tilia platyphyllos*). The walls of the moat are covered with ivy (*Hedera helix*), old man's beard (*Clematis vitalba*) as well as with nettle (*Clematis vitalba*) and grass. Low plants dominate on the side of the neck caponier where besides the above mentioned plants there are also the following species: mugwort grass (*Artemisia vulgaris*), common goldenrod (*Solidago virgauera*), grapevine (*Vitis vinifera*) and also seedlings of verrucated birch (*Betula pendula*) and maple-tree (*Acer plantanoides*).

The crown of this part of the fortifications as well as the inner embankment from the western side is densely covered with blackthorn (*Prunus spinosa*), white dogwood (*Cornus alba*) and high grass. This part of the fort is the most densely grown over with the wild plants. These plants in consideration of their wide expansion should be thinned out in order to improve transport and uncover the foundations of the fort.

The 19th century buildings in the central part of the citadel

Architectonic listing of shelters situated on the main rampart and listing of plants which grow around these shelters were carried out. Along with the description of the preservation condition of the building, species of plants growing in the area of the escarp and in the surroundings of the object were presented.

Underground pass of the staircase leading to the underground vaulted shelter (Sk1)

Dimensions

Width of the neck wall – 1180 cm, height – 375 cm, depth of the interior – 331 cm. Thickness of the earth layer is about 110 cm. The total area of the interior – 12.2 m^2,

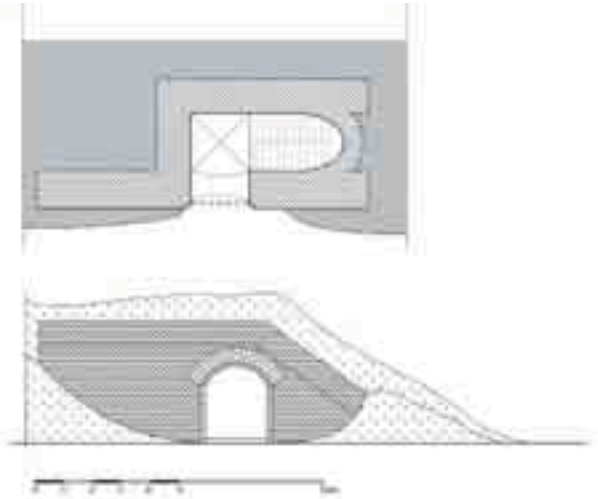

Fig. 8. Underground pass – Sk1 (drawn by the author)

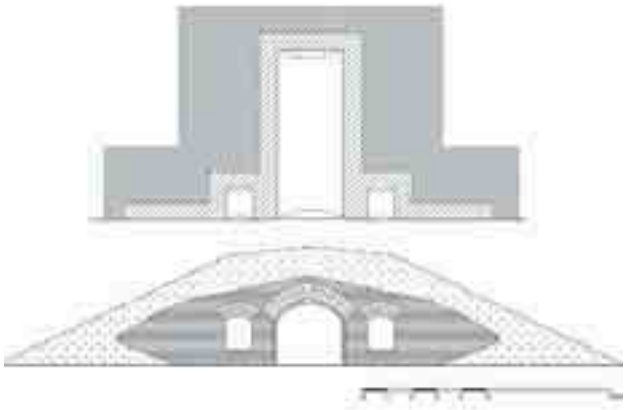

Fig. 9. Depot shelter – Sr2 (drawn by the author)

cubature – 210 m^3. Stone stairways have 20 steps, height – 18 cm; there is a walled up pass at the bottom.

Material: face brick and sandstone (stairway steps, indirect cornice), earth escarpment.

The condition of the wall and joints below the cornice is good – there are several minor losses in the door reveal; bad condition of the curtain wall above the cornice – cracks along the joints, dislocations of fragments, rising damp, a lot of lichen (wide-leaved tragacanth, fescue grass). Bricks peel off, losses of joints from 5 to 8 cm into the interior. The interior is damp, a lot of damp patches, the layer of lime which covers the walls and the cradle vault falls off. Leaves of the wooden door are preserved as well as the metal fitting of hinges. The wall above the cornice bends backwards by 15°.

In the western neck part of the shelter there is a well preserved ventilating chimney from the fort casemates.

Coach-house shelter (Sr2)

Dimensions

Width of the neck wall – 1415 cm, height – 344 cm, depth of the interior – 651 cm. Thickness of the earth layer is about 95 cm. The total area of the interior – 16.2 m^2, cubature – 199.5 m^3.

Material: face brick and sandstone (surmounting cornice), the earth embankment.

The condition of the wall and joints is good; there are several losses of bricks in reveals near metal hinges. There are also slight cracks of the bricks' layer below the stone cornice. The interior is dry; the wooden door of the canon shelter is preserved in good condition. The earth escarp is legible but it requires removing of self-sown plants and the reconstruction of turf.

Green areas

The fort salient (No. V), where these objects are located, is mainly covered with high trees of such species as maple-tree (*Acer plantanoides*), elder (*Sambucus nigra*), wide-leaved linden (*Tilia platyphyllos*), ash-tree (*Fraxinus exelsior*) and mountain elm (*Ulmus glabra*). These trees are characterized by the height of about 15–17 meters; their crowns are not too wide owing to a limited access to the sunbeams. Escarps are covered with low grass, nettle and fern; whereas several-year-old seedlings of the above mentioned trees and bushes such as white dogwood (*Cornus alba*) and dewberry (*Rubus caesius*) mainly form the undergrowth. The inner part of the fort crown, platform and inner embankment are mainly covered with big and thick concentrations of white dogwood (*Cornus alba*), elder (*Sambucus nigra*), blackthorn (*Prunus spinosa*) and high grass. In the surroundings of Sk1 we can see a concentration of young durmast (*Querqus robur*) and a group of briar rose bushes (*Rosa canina*). The whole area is covered with very thorny bushes of blackthorn (*Prunus spinosa*). There are various species of grass and plants in the undergrowth.

Underground pass of the staircase leading to the underground vaulted shelter (Sk1)

Dimensions

Width of the neck wall – 1145 cm, height – 395 cm, depth of the interior – 334 cm. Thickness of the earth layer is about 110 cm. The total area of the interior – 12.78 m^2, cubature – 219.5 m^3. Stone stairways have 26 steps, height – 16 cm; there is a walled up pass at the bottom.

Material: face brick and sandstone (stairway steps, indirect cornice), earth escarpment.

The vestibule has a cross vault and a floor made of bricks. There is a shelter over the staircase. The condition of the object is similar to Sk1.

Depot shelter (Sr2)

Dimension

Width of the neck wall – 1520 cm, height – 358 cm, depth of the interior – 650 cm. Thickness of the earth layer is about 120 cm. The total area of the interior – 16.1 m^2, cubature – 215.8 m^3.

Material: face brick and sandstone (surmounting cornice), the earth embankment.

The condition of the wall and joints is good; there are several losses of bricks in reveals of the main door; in the western part of the neck wall there are damages of the wall face caused by dampness. There are also slight cracks of the brick layer below the stone cornice. The interior is dry and in good condition. Metal fitting of hinges are preserved. The earth escarp is legible, but it requires removing of self-sown plants and the reconstruction of turf.

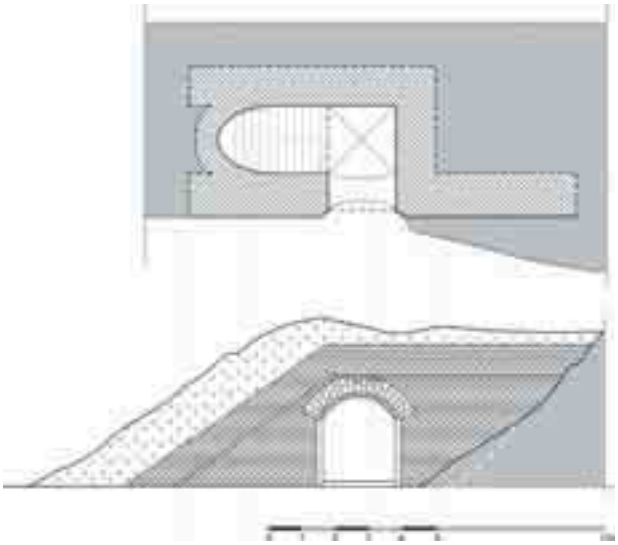

Fig. 10. Underground pass – Sk2 (drawn by the author)

Green areas

Dominating species are maple-tree (*Acer plantanoides*) and mountain elm (*Ulmus glabra*) which constitute 90% of all trees growing there. These trees usually are 16 meters high and their crown diameter is 7–8 meters. Other species are as follows: durmast trees (*Querqus robur*), maple-tree sycamore (*Acer pseudoplatanus*) and ash-tree (*Fraxinus exelsior*). In the middle layer, several-old-year seedlings of the above mentioned species are dominant as wells as bushes such as blackberry-bush (*Rubus fruticosus*), briar rose bushes (*Rosa canina*), white dogwood (*Cornus alba*), common evonymus (*Euonymus europaeus*) and blackthorn (*Prunus spinosa*). The undergrowth consists if various species of grass and herb plants.

Guardhouse shelter (SW)

Dimensions

Width of the neck wall – 530 cm, height – 349 cm, depth of the interior – 719 cm. Thickness of the earth layer is about 110 cm. The total area of the interior – 16.5 m^2, cubature – 162.2 m^3.

Material: face brick and sandstone (the cornice of side revetments), stone foundations, the earth embankment.

Condition of the wall and joints is bad; loosening on the gable wall of revetments; numerous cracks along joints and losses in wall corners. There are gaps in the stone cornice caused by plants which grew into it. The main interior is dry, the floor is made of bricks, and the remnants of a wooden floor are preserved; a layer of lime together with the face of damp bricks peel off in the vestibule. This layer constitutes the finishing of walls and the vault. There are two ventilating holes in the partition wall near the floor and one installation hole. There is a ventilating hole on the axis of the back wall (signs of using it as a smoke conduit). A one-flap entrance gate covered with galvanized iron is preserved. There are no metal fittings of hinges. The earth embankment is legible but requires removing of self-sown plants and a reconstruction of turf.

Green areas

This area (salient I) is densely covered with a variety of plants which grow widely on the fighting slope and on the outer and inner part of the fortifications crown as well.

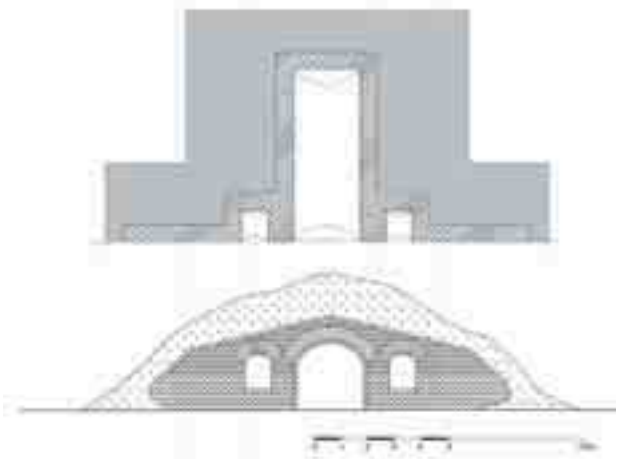

Fig. 11. Depot shelter – Sr1 (drawn by the author)

The wall face is densely covered with moss and grass. Maple-tree (*Acer plantanoides*) is a dominating species in these areas and constitutes 70% of all trees growing there. In general, the trees are of a similar size – trunk diameter 55 cm, height 15 m, diameter of crowns about 5–6 m. The form and size of their crowns is conditioned by dense undergrowth of this area and no access of sunbeams. Apart from maple-trees there are also other concentrations of tree species such as wide-leaved linden (*Tilia platyphyllos*), mountain elm (*Ulmus glabra*), ash-tree (*Fraxinus exelsior*) and durmast trees (*Querqus robur*).

In lower layers, there is a great variety of plants too. These are mainly young trees of species which were mentioned above and also blackthorn (*Prunus spinosa*) and white dogwood (*Cornus alba*). They are accompanied by few bushes such as blackberry-bush (*Rubus fruticosus*), briar rose bushes (*Rosa canina*). Plants in the lower layer consists of various species of grass, fern and nettle.

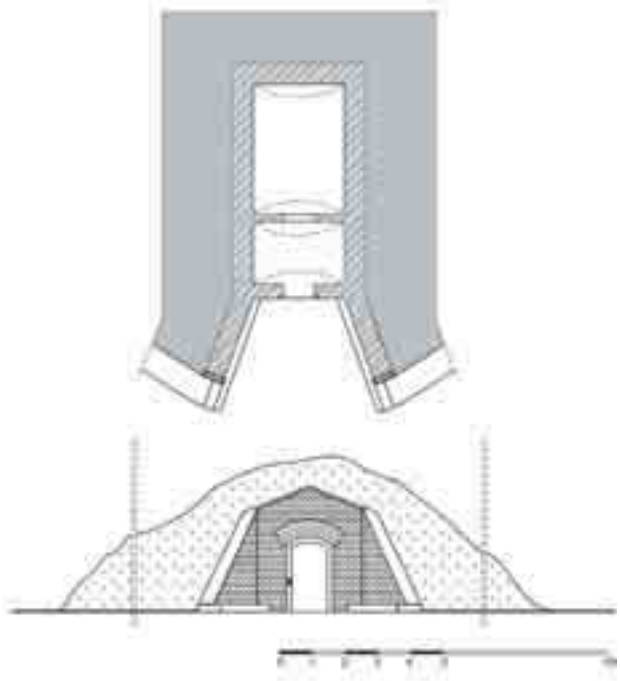

Fig. 12. Guardhouse – SW (drawn by the author)

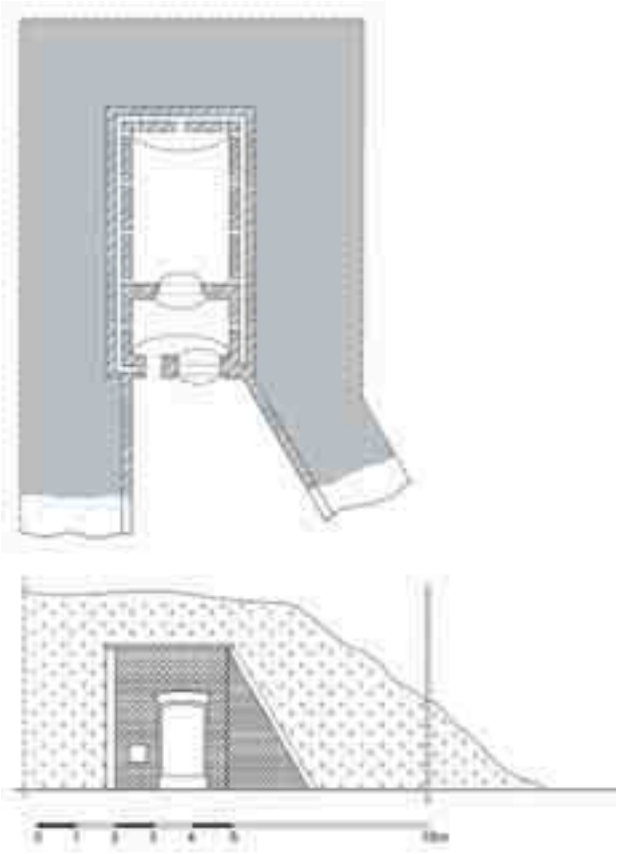

Fig. 13. Ammunition storehouse MA (drawn by the author)

Ammunition storehouse (MA)

Dimensions.

Width of the neck wall – 295 cm, height – 355 cm, depth of the interior – 525 cm. Thickness of the earth layer is about 120 cm. The total area of the interior – 13.4 m^2, cubature – 72.5 m^3.

Material: brick and sandstone earth embankment.

The vestibule and main room are vaulted probably in the form of a two-layer cradle; similarly, walls and floors are also made of two layers with a ventilating fissure. Around the room, there are ventilating holes in three layers.

Walls are dry; the brick floor is damp, erosion of the wall face of the neck wall. There are some remnants of lime plaster inside. Wall coping of revetment are destroyed.

Green areas (see chapter "Half-caponier (PK)")

Ammunition laboratory (LA)

Dimensions

Width of the neck wall – 1600 cm, height – 345 cm, depth of the interior – 440 cm. Thickness of the earth layer is about 100 cm. The total area of the interior – 38.2 m^2, cubature – 297.8 m^3.

Material: brick.

The arrangement, which was originally symmetric, contains two rooms vaulted in the form of a cradle on both sides of the pass (the northern one is walled up) which leads to the ammunition storehouse with a cross vault; then, two rooms with a vault in the form of a cradle (the northern one was destroyed, the southern was liquidated). The floor made of cement. Layered walls with a ventilating slot. A reconstruction probably took place in the first half of the 20th century; depth was shortened, rebuilding by means of cellular bricks, filling in the space above the cradle by means of crushed brick based on the cement mortar and liquidation of the southern room.

The object is in good technical condition; recently, it has undergone unfortunate renovation during which bricks and joints were painted on the vault. After renovation – walls are plastered.

Green areas

On the western side, the fighting slope of salient III is covered with plants in a similar way as on other salients. Again, the dominating species is the maple-tree (*Acer plantanoides*) which constitutes 90% of trees growing there. Apart from maple-trees we can also see there durmast trees (*Querqus robur*) and common hornbeam (*Carpinus betulus*).

The southern part is covered with trees which are maximally eight meters high. The highest ones are young trees of such species as ash-tree (*Fraxinus exelsior*) and maple-tree sycamore (*Acer pseudoplatanus*). This area is more densely covered with plants in the lower layers. There are mainly such plants as common lilac (*Syringa vulgaris*), whitethorn (*Crataegus monogyna*), white dogwood (*Cornus alba*) and more seldom species of verrucated birch (*Betula pendula*) which grow in concentrations of several trees.

On the inner part of the embankment, the most expansive species is blackthorn (*Prunus spinosa*); it is also covered by briar rose bushes (*Rosa canina*) and dewberry (*Rubus caesius*). Undergrowth consists of various species of grass and herb plants.

Neck caponier (KS)

Dimensions

Width of the neck wall – 630 cm, length – 1252 cm, height – 470 cm. Thickness of the earth layer is about 130 cm. The total area of the interior – 40.81 m^2, cubature – 370.7 m^3.

Material: brick, earth cover of the ceiling.

A cross-shaped cover with the apse on the axis, a brick floor. A brick cornice made of scantling, reconstructed entrance (in years past it was a bow-shaped, now – a flat lintel). There are two gates on both sides of the

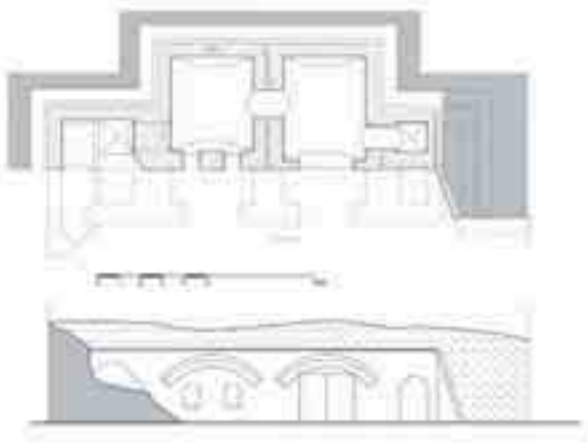

Fig. 14. Ammunition laboratory – LA (drawn by the author)

caponier; the western preserved one is walled up, whereas the eastern one is totally reconstructed. There are five shooting holes; two of them are walled up.

The wall and joints are mostly in good condition; a few cracks along the joints and some losses in the corners; some remnants of plaster on the neck wall side. Plants loosen a brick cornice; in the south-eastern part of the wall below the cornice there are serious losses of the wall face caused by dampness. The brick floor is preserved; the wall is damp at the bottom and a layer of lime, which constitutes the finishing of walls and the cradle of the vault, peels off. The preserved flap of the entrance gate is in bad condition.

Plants in the middle layer grow in small amounts and these are mainly self-sown plants of verrucated birch (*Betula pendula*) – 60%, maple-tree (*Acer plantanoides*) – 30% and white dogwood (*Cornus alba*) – 10%. Undergrowth consists of various species of grass and herb plants.

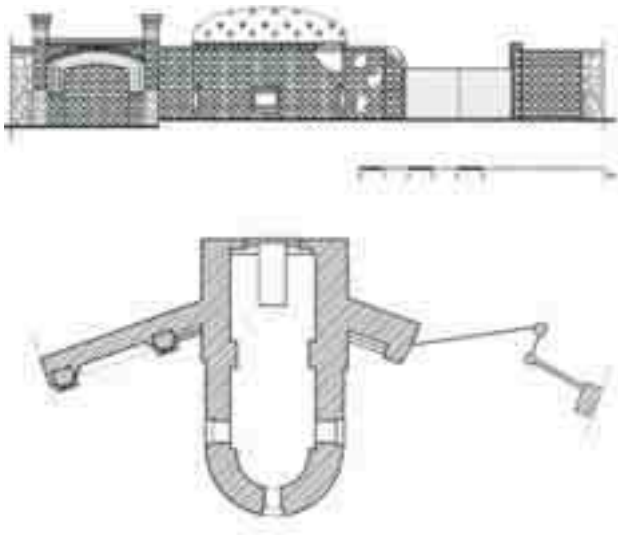

Fig. 15. Neck caponier – KS (drawn by the author)

General characteristics of green areas on the main rampart of the fort

Nowadays, the area of the fort is dominated by plants and green areas. This situation causes a total spacious deformation of the arrangement of the earth ramparts and makes it difficult to find fortification objects in this area. There are valuable species of plants which are characterized by their uniqueness, age and also landscape values in a given place. This area constitutes a shelter for many species of birds and mammals. This is a place of tremendous historical as well as architectonic values. Not only fans of fortifications can be fascinated by this site but it can also be a place of education for young people as well as a place of admiration of its beauty and it can attract ordinary people who go for a walk there. Old showpieces of trees emphasize the old foundations of the object, i.e. its uniqueness. Roots of trees, unless they do not make the walls break, contribute to a better solidity of the scarp ground. The walls are shadowed by crowns of trees, which reduce the destructive influence of the sun. The plants, which cover ramparts and moats, make us reflect upon the lapse of time; in the dark shadow of thickets we can imagine past events. The reigning silence in this place can be a great escape from noisy cities and summer heats. But at the same time, these plants are the reason of the walls' and scarps' destruction. Taking proper action concerning the liquidation of plants and new seedlings constitutes a very important issue [4].

In this area, there are also trees whose root systems endanger the wall structure. The following trees should be removed in the first place: 1) maple-tree sycamore (Acer pseudoplatanus; 2) durmast trees (*Querqus robur*); 3) wide-leaved linden (*Tilia platyphyllos*); 4) maple-tree (*Acer plantanoides*); 5) wide-leaved linden (*Tilia platyphyllos*); 6) verrucated birch (*Betula pendula*); 7) maple-tree (*Acer plantanoides*); 8) ash-tree (*Fraxinus exelsior*); 9–12) wide-leaved linden (*Tilia platyphyllos*).

Fig. 16. Inner moat of Prussia Fort. Entrance ramp on Rawelin Pomorze (photo: J. Potyrała)

General concept of revalorization

A monument of military architecture, which constitutes a great cultural value, should be generally accessible, supervised and taken care of. The physical condition of the fort is constantly becoming worse. Essential preservation works should be done as soon as possible in order to protect the building substance of the fort. To start preservation works, the necessary architectonic listing of the whole object should be carried out; the fullest historical documentation including stages of the fort's reconstructions should be collected. Only by doing this is it possible to start planning of a new function and designing the arrangement as well as the management of the area. The only chance to save the whole object and make it more lively, is to attribute a new

Fig. 17. Destructive influence of plants on the construction structure (photo: J. Potyrała)

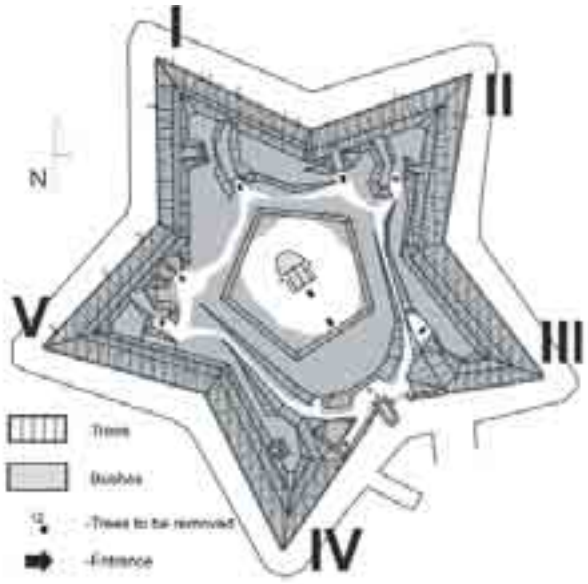

Fig. 18. Resource of plants on the main rampart of the fort (drawn by the author)

function to it taking into consideration all preservation requirements which must be obeyed.

The object should earn its own living and this would be the best solution with reference to different functions. Nevertheless, it cannot be an isolating function. Casemates of the underground shelter which are situated in the centre of the object give great opportunities of adaptation in order to fulfill various functions; however, undertaking building works in the area of the fort is connected with big costs.

It seems that at the beginning, tourist could be allowed to visit the area of the front crown and the main ramparts. This requires preservation works for the small objects mentioned earlier and corrections of green areas. The surface of ramparts was covered only with grass as early as at the beginning of the 20th century. It does not seem purposeful to remove all the trees and bushes from the ramparts. In order to make the defensive system more legible, it is necessary to remove self-sown plants and new roots up to 30 cm in circumference and the reduction of bushes so that they form just few smaller complexes between shelters. The planned process of cutting down big trees should be limited to those ones which destroy the structure of the wall and obscure the view axes (of fortification works and towards the direction of Fort II). The trees situated on the edges of salients shall emphasize their landscape dominants (similarly to the experiences of Srebrna Góra Stronghold). On the maidan it is possible to use specially shaped decorative plants as garrison greenery. Such gradual removal of the plants which cover the fort will not influence rapidly the environment conditions and the system of ground water and at the same time it will enable a better exposition of the object. It is necessary to reconstruct the earth ramparts following the repair of anti-damp insulation of the building structures and, finally, to turf the scarps again.

Translated by Bogusław Setkowicz

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