REPORT ON STUDY VISIT

IN JANOWIEC CASTLE, POLAND

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REPORT ON STUDY VISIT IN JANOWIEC CASTLE

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Table of contents

1. AGENDA OF STUDY VISIT TO RUINED CASTLE IN JANOWIEC, 14/06/2017 3
2. LIST OF STUDY VISIT PARTICIPANTS 5
3. HISTORY OF JANOWIEC CASTLE 7
4. SURROUNDING AREA 15
4.1. Janowiec and the surrounding areas - the current condition 15
5. THE CASTLE AND ADJACENT AREAS 20
6. CASTLE'S STATE OF PRESERVATION 28
6.1. Studying and analysing ruins 28
6.2. Documents concerning ruins 29
6.3. Structure reinforcement 30
6.4. Buildings 32
6.4.1. Buildings - historical reconstructions 33
6.4.2. Buildings - contemporary reconstructions 36
6.5. Protecting external face of the walls 38
6.5.1. Face of walls - protective solutions 38
6.5.2. Janowiec Castle - protecting the face of the walls 39
6.5.3. The face of the walls - condition analysis 41
6.6. Wall coping 42
6.6.1. Wall coping protection measures 42
6.6.2. Janowiec Castle - protecting wall coping 43
6.6.3. Location of walls with protected coping 43
6.6.4. Wall coping - condition assessment 45
6.7. Drainage and rainwater discharge 46
6.7.1. Water drainage installations for roofs, terraces, and ceilings with no roof provided 47
6.7.2. Surface drainage solutions. 47
6.7.3. Drainage facilities 47
6.7.4. Drainage and rainwater discharge in Janowiec Castle 47
6.8. Protection of architectural detailing 50
6.8.1. Stone detailing 50
6.8.2. Moulding 51
6.8.3. Plaster 52
6.8.4. Sgraffiti and polychrome paintings 54
6.9. Other buildings and elements of the premises 55
6.9.1. Courtyards 56
6.10. Vegetation 59
6.10.1. Cultivated compositions and loose vegetation 59
6.10.2. Unwanted vegetation 63
7. BIBLIOGRAPHY 65

1. AGENDA OF STUDY VISIT TO RUINED CASTLE IN JANOWIEC, 14/06/2017

Part I: Multimedia presentations:

- Problems of management of the ruined castle in Janowiec – Agnieszka Zadura
- Use of the ruied castle in Janowiec – Danuta Olesiuk
- History of Janowiec castle and conservation works in the ruined castle – Filip Jaroszyński
- Technical and conservation problems of the maintenance of the ruin in Janowiec – Jerzy Żurawski

Part II: Presentation of technical condition of the ruin in Janowiec and examples of conservation and technical works carried out in ruined castle in Janowiec – in situ survey

2. LIST OF STUDY VISIT PARTICIPANTS

Study visit to ruined castle in Janowiec, Poland

June 14th, 2017

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3. HISTORY OF JANOWIEC CASTLE

I. History of the property and reconstruction stages

In late Medieval, south-west to Wojszyn, where Janowiec was established, there was a settlement called Serokomla, also known as Syrokomla. It was listed in a parish record in 1325.[1]

In the late 15th century, the properties in Serokomla—re-named in 1537 to Janowiec—were purchased by Piotr and Mikołaj Firlej of Dąbrowica outside Lublin from the Janowski family. The subject castle was built in the first quarter of the 16th century upon Mikołaj Firlej's order.[2]

The castle was built where formerly defense structures had been erected—presumably—by the Janowski family.[3]

Drawing 1 Castle in Janowiec nad Wisłą. Drawing by E. J. Dahlberg, 1656.

The fortress castle is built on a headland of the Vistula plateau and surrounded by a deep, dry moat. Originally, it consisted of a gate house provided with a bastion, foregate, i.e. a neck and two-storey caponier, a grand north-east bastion, east fortified tower ('puntone'), two north- and south-facing towers used for defence and residential purposes, and—presumably—a tower in the south-west corner. These elements were connected with a loopholed curtain wall surrounding a grand courtyard, which was big enough to accommodate the entire population dwelling Firlej properties.

[1] Supryn M., *Archeologia zamku w Janowcu, Dzieje budowli w świetle badań archeologicznych z lat 1976-2001*, Vistula Museum in Kazimierz Dolny, Janowiec Castle Museum 2008, p. 25: Żurawski J., "Zamek w Janowcu na Wisłą. Budowa - rozbudowa- ruina - konserwacja- rewaloryzacja- zagospodarowanie," Ochrona Zabytków, vol. 1/2 2003, pp. 5-33

[2] Kurzątkowscy A. M., *Ruiny zamku Firlejów w Janowcu nad Wisłą (woj. lubelskie , powiat puławski)*, 1961 mps. Vistula Museum in Kazimierz Dolny

[3] Supryn M., op. cit., p. 27. According to Krzysztof Rowicki, the first construction works aiming at building the castle must have been initiated by the Janowski family. Mikołaj Firlej, however, developed the property after 1496.

Drawing2 The castle and what it might have looked like in the first quarter of the 16th century, facing the south-west. Drawing by T. Augustynek, 1994.

The Firlej family held ownership over the castle until the late 16th century. In 1537, Janowiec received town charter from Sigismund I the Old. Mikołaj's son, Piotr, ruled in Janowiec in the period of 1526-1553. In the town charter, it was written that the city was located in close proximity to the castle, "built by Piotr Firlej (...) at a considerable cost."[4]

Mikołaj's successors converted the fortress into a residential property. It was in the period of 1565-1579 when Santi Gucci, upon Andrzej Firlej's order—who was royal secretary and Lublin castellan—carried out the first major extension and development works.

Piotr's youngest son, Andrzej, was in charge of the castle in the years 1553-1585. After he passed away, the works were probably continued by his wife, Barbara of Szreńscy, belonging to the noble clan of Dołęga.

In the south-east part of the fortress, he built a palace in the Renaissance order and provided it with an attic, arcades, and a quarter landing staircase. The east fortified and the south residential towers were incorporated in the palace. A wall with few-story column arcades was built across the courtyard of considerable size. Consequently, two courtyards were created. One of them, also referred to as the Grand Courtyard, was provided with elements designed in Renaissance order. The new building was decorated with stone masonry elements, typical of Santi Gucci.

[4] Supryn M., ibidem, p. 27. According to this information, construction of the bastion castle in the period of 1526-1537 was attributed to Mikołaj Firlej.

Drawing3 The castle and what it might have looked like in the late 1670s, facing the south-west. Drawing by T. Augustynek, 1994.

The Firlej family was in charge of the castle until late 16th century, when the Tarło family, following family connections, became owners of the subject property. In 1740s, upon Jan Karol Tarło's request, the most extensive construction works in the castle's history were carried out. [5] Andrzej Firlej's palace was demolished and one of its walls was used as foundation for a larger, two-storey wall. The structure was flanked in its east- and west-facing parts, provided with cylindrical towers and featured a suite of rooms. Furthermore, a north house and a four-storey east-facing wing featuring pillar-supported arcades were built on the Grand Courtyard. The grand bastion, which already under the Firlej Family was no longer used for defense purposes, was surrounded with four-storey arcades and housed residential apartments.

Drawing 4 The castle and what it might have looked like in the third quarter of the 17th century, facing the south-west. Drawing by T. Augustynek, 1994.

[5] Żurawski J,. op. cit. p. 6.

In 1654, following marriage between Barbara, daughter of Jan Karol Tarło, and Jerzy Sebastian Lubomirski, the castle passed into ownership of the powerful Lubomirski family for over 125 years. The recently-rebuilt property was a dowry given to Jerzy Sebastian. Further investment works were undertaken in 1689 by his son, Jerzy Dominik. The demolished north residential tower was replaced by servants' rooms and—over the well on the Minor Courtyard—by a chapel being supported in the west by arcades. Water drawing equipment was installed on the ground floor. The main chapel—accessed from the arcades on the Grand Courtyard—was housed on the upper floor. The interior of the chapel was decorated in Baroque style. Although the period of constructing the building coincides with construction works carried out by the most prominent Polish architect of Baroque, Tylman of Gameren, the building itself has features typical of late Lublin mannerism.

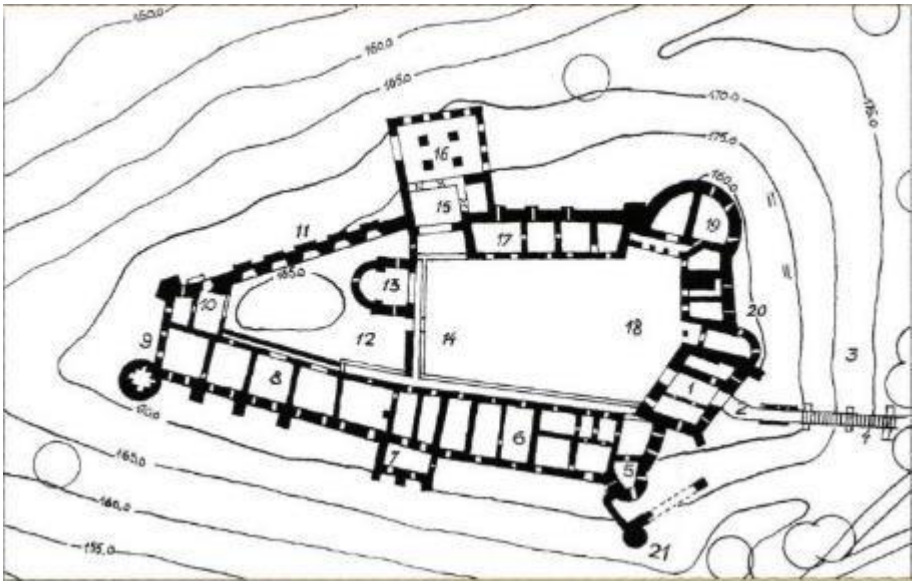
Antoni Benedykt Lubomirski, Jerzy Dominik's son, extended the palace of the Tarło family by constructing a building in the west part of the Minor Courtyard. Activities falling within the scope of construction and renovation works included new moulding and paintings done in Louis XV style as well as alteration and decoration—in rococo order—of windows in the entire south suite of rooms. It was also the time of the residence's glory days (1727-1761).

The last member of Lubomirski family to rule in Janowiec, Marcin, sold the castle in 1780 to Mikołaj Junoszy Piaskowski, who was later in charge of the properties in Janowies for over ten years. In the 19th century, the premises had different owners, who, however, could not afford to cover considerable maintenance costs. In the years 1803-1878, the castle was in the possession of the Osławski family. Although they were the longest-residing house in the subject property, they failed to repair the damage the premises suffered in the war between The Duchy of Warsaw and Austria as well as during the retreat of Napoleon's corps from Moscow. It was already Marcin Lubomirski who transported most of movable properties from Janowiec to Lubań in Ukraine. The Osławski family either sold architectural elements, e.g. fireplaces, floor tiles, etc., or transported them to their smaller residences in Oblasy and Warsaw.

In the 1850s, the castle started to be gradually demolished - it became a source of building materials. As local inhabitants would steal roof tiles, the property became an open ruin. In the early 1920s, Ćwirko-Godyccy parceled out the assets. In 1931, Zieleniewski family sold the ruins to Leon Kozłowski. In spite of considerable efforts, he did not manage to prevent the property from falling into ruin, which was also escalated by shellfire the castle suffered during the second World War, severe weather conditions, and vegetation growing on the castle walls.

In 1975, the property and the adjacent areas were purchased by the Vistula Museum in Kazimierz Dolny with the aim of preserving the ruins as well as opening a branch there. [6]

[6] Ibidem, p.7.



Drawing 5 The castle - floor plan

Floor plan of the castle: 1. Gate house, 2. Foregate neck, 3. Moat, 4. Bridge, 5. East tower (originally - puntone fortified tower), 6. South suite of rooms - east part (Andrzej Firlej palace), 7. South residential tower (south avant-corps), 8. South suite of rooms - west part (Palace of the Tarło House), 9. West tower, 10. West apartment, 11. North defense wall, 12. The minor courtyard, 13. Chapel and well, 14. Arcades, 15. North residential tower demolished in the 17th century, 16. Servants' rooms in the north part of the property, 17. The north house, 18. The Grand Courtyard, 19. The Grand Bastion, 20. East wing, 21. Inter-wall bastion Drawing by T. Augustynek, 1995.

II. Adaptations and conversions of selected parts of the castle

In general, the castle is a permanent ruin. Selected fragments were adapted to serve tourism purposes. In the 1980s and 1990s, basing on past studies, documentation concerning preservation and reconstruction works was produced. The works were carried out in the gate house, north house, west tower, and west apartment. As a result, the east tower was reconstructed on the ground floor as well as developed and reinforced on the upper floors. Cracks in the walls were repaired, wall coping in other parts of the castle were provided with appropriate protection.

Gate House (1) - outter part of the north-east wall survived entirely and in its upper part, it is protected with ceramic roof tiles. The courtyard-facing wall is reconstructed up to the first floor. Both the gate tunnel and usable rooms on the ground floor were covered with a flat roof incorporating a viewing balcony. The gate house houses ticket office, souvernir shop, temporary exhibition rooms, guardroom, and staffroom. The basement was converted into toilets and lapidarium. Upper floors overlooking the area are in permanent ruin and are open to visitors. In the east wing, there are maintenance and stock rooms. On the first floor, two residential rooms are adapted for exhibition purposes and are open to visitors. On the upper floor, there are two guest rooms. Like in the gate house, the top floor of the east wing overlooks the surrounding area and is in permanent ruin. The remnants found in the premises in question provided basis for

reconstructing decorations on the face of external walls of the building, i.e. wide, horizontal, white and vermilion stripes.[7]

Foregate (2) - remnants of two walls sticking above grade level on both sides of the castle entrance road is what remained from the foregate.

Moat (3) - predominant part of the moat is covered with soil and debris. In the closest proximity to the bridge, the depth of the moat is approximately six metres.

Bridge (4) - built in the eighties; its original purpose was to provide access to the castle when renovation, reconstruction, and preservation works were carried out in the subject property.

East tower (5) - nearly the entire building is a permanent ruin; the only exception is one room on the ground floor, which was provided with a flat roof, renovated, and used for office purposes. Later, an additional floor was added to the fortified tower featuring a semicircle floor plan and having been constructed together with defence walls. In the plan, its outline resembles a circle floor plan. Until the eighties, large remnants of the walls on the ground floor and small remnants the walls on the first floor had been elevated. What remains of the wall on the second floor is one pillar between the windows. The south wall of the tower was reconstructed.

East part of the south suite of rooms (Andrzej Firlej palace) (6) - partly reconstructed (west part), partly in ruin (e.g. the upper floor). At present, due to being in poor technical condition, it is closed to visitors. In the overground part of the palace, only the south wall and remnants of the ground floor walls in the other part of the building are still standing. Cavities and gaps in the upper parts of these walls were repaired and filled with lime stones, joined with lime mortar, and left in permanent ruin. In close proximity to the east tower, remnants of the attic and the moulding beneath it were provided with metal elements protecting them against precipitation.

South residential tower (south avant-corps) (7) - external walls in the south part of the building are still standing. In the courtyard-facing part of the building, a basement wall is still rising up to the ceiling level. The vault is protected with a temporary wooden roof covered with tar paper.

South suite of rooms, west part (Palace of the Tarło House) (8) - a part of collapsed south wall was reconstructed. All vaults covering basements were also reconstructed. The vaults are made of ceramic brick and joined with cement and lime mortar. They are covered with insulation and cement mortar and provided with gargoyles conveying water away from the side of the building. Walls being a part of the ground floor are in permanent ruin. Only in certain parts, cavities and gaps in the south wall were repaired so that the walls would reach eaves of the cornice. The rest of the face of the wall, which is richly decorated, is not provided with any protection against precipitation.

West tower (9) - reconstructed; preservation works in the tower office are unfinished. In the eighties, cracked tower walls were reinforced with two polygon horizontal frames made of steel c-profile bars. The frames are installed on two levels, above the vault of the office arranged on the first floor.

West apartment (10) - reconstructed. As part of conservation works, a significant part of the ground floor and walls of the first floor facing the minor courtyard were reconstructed. The ground floor is covered with

[7] Reconstruction works were planned and carried out by G. Sądecki.

new vaults and ceilings. The first floor is provided with monolith ceilings made of reinforced concrete and supported with binding joists. The entire building is covered with two mono-pitched roofs attached to the former curtain walls. The roofs are covered with interlocking ceramic roof tiles. In the courtyard-facing part, the building is covered with plaster and provided with single glazed windows. Its interior is unfinished.

North defence wall (11) - protection of the wall coping incorporates hard, irregular, lime stones.

Minor courtyard (12) - The surface of the minor courtyard is not cobbled. Debris and excavation soil is scattered all over the place. No sewage inlets available.

Chapel with well (13) - in permanent ruin; temporarily adapted for entertainment purposes (concert stage). Preservation works were carried out in the side and apse walls. Rood arch was reconstructed. No front wall, vaults and roof. The walls still standing are in permanent ruin. At the chapel, a part of wall connecting the north house with the palace was reconstructed (one arcade and two pillars).

North residential tower (demolished in the 17th century) (14) - foundations are still raising; remnants of the walls forming the ground floor are displayed at servant quarters.

Servant quarters (north part of the premises) (15) - in permanent ruin. Remnants of basement rooms filled with soil and walls forming the ground floor are still displayed. Research studies were conducted in the basement.

North house (16) - west part of the basement was converted into toilets. On the ground floor, there are rooms which are used for exhibition and conference purposes (permanent exhibition showcasing former owners of the castle, its history as well as restoration works carried in the property in the period of 1975-1998). On the upper floor of the north house, there are guestrooms. The most recent preservation and construction works resulted in repairing most cracks and cavities in walls raising above the ground as well as installing new roofs: vaults stretching over the basement and three rooms on the ground floor as well as a flat roof stretching over the fourth room on the ground floor and the entire first floor. The entire building is covered with a new mono-pitched roof with wooden rafter framework supported on three king post walls. The roof is covered with ceramic tiles. Exhibition rooms are on the ground floor. Basement rooms house museum exhibitions and toilets. Construction works aimed at arranging guestrooms were started on the first floor. Once the building shell was ready and still not provided with doors, the works were stopped.

The Grand Courtyard (17) - an arcaded courtyard of considerable size in the east wing of the premises is a perfect place to organize concerts and shows. The courtyard is cobbled in its north part only. At the chapel, in the west end of the courtyard, there is a sewage inlet, which rises several centimetres above grade level. It does not, however, convey surface water from the courtyard. The uncobbled surface of the courtyard is uneven. Precipitation water accumulates in hollows and is soaked up by soil. This may make the groud soggy at building foundations.

Grand Bastion (18) - only one room in the entire building, a coffee shop, is not in permanent ruin. Outside this building, there is a limestone wall with three rows of windows. It is raised on the original outline of defense walls.

East wing (20) - external wall of the arcades facing the courtyard was reconstructed. Cavities and cracks in other walls were repaired. New ceilings and a tunnel staircase were constructed. The building is covered with a flat roof stretching over the second floor. The building is currently used. It houses offices as well as stock and maintainance rooms.

Interwall bastion (21) - bastion foundations rise over grade level and are protected with limestone.

III. Manor buildings and castle surrounding areas

In the park adjacent to the castle, there is a group of wooden manor buildings of great historical value transported from Janowiec - a manor house in Baroque order built in 1770s in Moniaki outside Urzędów, a granary built in the second half of the 19th century in Podlodów at the Wieprz River, a barn built in the 19th century in Wylągów outside Kazimierz, a coach house built in the 19th century in Kurów, and a small residential house built in the 1920s in Puławy. The premises are provided with separate garden fencing which merges with the castle park. The purpose of transporting the buildings was to save them from dilapidation and adapt them for residential, storage, and office uses. Over time, they were adapted for museum purposes - the interior of the manor house is open to visitors. Additionally, there are also guestrooms. The granary houses ethnographic exhibition and the barn - nineteenth- and twentieth-century carts made in Lesser Poland. Utility rooms were arranged in the coach house featuring a quincha.

As the works in the castle were commenced, landscape maintenance activities were undertaken, e.g. old growth forest in the park was tidied up. Trees and bush were planted where vegetation was missing and the castle hill was deforested. The premises were fenced, front fencing was raised, the park gate was provided with a porter's lodge, and parking lots were arranged.

4. SURROUNDING AREA

4.1. Janowiec and the surrounding areas - the current condition

Picture 6 Location of Janowiec (source: maps.google.com)

Janowiec is a village in Lublin Region, Puławy District, Janowiec Commune. The village is situated where the Plewka river meets the waters of the Vistula river. The village and the castle are seated 130 and 150 metres above sea level respectively. Janowiec is located north-west to Lublin (70km) and south-east to Warsaw (140km). In the 16th century, it was owned by Lublin castellan, Andrzej Firlej. Until 1954, it had been a seat of Oblasy Commune authorities.

According to Central Statistical Office,[8] in 2015, Janowiec was inhabited by population of 3,675 people. In 2015, 2.1% of the total amount of financial resources available in the commune's budget was planned to spend for culture and heritage protection.

The castle built in the early 16th century by Mikołaj and Piotr Firlej is the most frequently visited historic monument in Janowiec. At present, it is a branch of the Vistula Museum in Kazimierz Dolny. Additionally, a group of manor buildings consisting of the following structures was also transported to the museum-owned area:

- manor house in Baroque order built in Moniaki in the period of 1760-1770 by the Wierzbicki family. It houses several guestrooms and an exhibition showcasing interior design of landowner's house;
- wooden granary built in Podlodów at the turn of the 18th and 19th centuries housing an ethnographic exhibition;

[8] http://lublin.stat.gov.pl/vademecum/vademecum_lubelskie/portrety_gmin/powiat_pulawski/gmina_janowiec.pdf

- a barn built in Wylągi in the late 19th century,
- quincha built in Kurów in the late 19th century.

In the centre of Janowiec, there is a church built in the 1350s in Gothic order. In the 16th century, it was rebuilt in the Renassaince style. It houses a gravestone on the Firlej family's grave and Santi Gucci's chisels.

- **Access from district roads**

The road connecting Janowiec to Lublin, Kazimierz Dolny and Nałęczów runs through Puławy, which is accessed from regional roads. Accross the Vistula river, there is a district road no. 743 from Góra Puławska to Janowiec Castle.

Travellers from Warsaw can access Janowiec by regional roads through Zwoleń or Przyłęk, which are in close proximity to the subject destination. Then, a district road runs directly to the museum gate.

A bridge hanging over the Vistula River in Puławy is of key importance in accessing Janowiec Castle. Being located 10 km away from Janowiec, it is the only way to access the subject premises in 30-kilometer radius.

The castle itself is accessed through an asphalt road. There is a car and coach park nearby.

- **Adjacent towns and villages**

Janowiec is located in close proximity to the Puławy - Kazimierz Dolny - Nałęczów tourist triangle. The distance between Janowiec and each town is:

- Puławy is 14 km from Janowiec. It is a city situated in river basin in western part of Lublin Region. In 2016, its population was 48.5 thousand.
- Puławy is an industrial (chemical, construction engineering, pharmaceutical), scientific (higher education institutions, five R&D centres), tourist and cultural as well as museum centre (the first museum in Poland, the oldest museum in Central Europe). Additionally, it is a transport hub with a river harbour, two bridge crossings, and main road and railway traffic routes.
- In historic records, Puławy (Pollawy) was mentioned for the first time in the late 15th century.
- The most important historic monument in Puławy is the Palace of the Czartoryski Family, which was built in Baroque style by members of the House of Lubomirski in the period of 1676-1679, as designed by Tylman of Gameren. It is surrounded by a thirty-hectar landscape park, which was established by the Lubomirski family as a regular park. Since then, its design was adjusted to match the changing style of the palace. The following historic monuments can be found within the confines of the park: The Church of the Assumption of Mary built in 1800-1803 and design of which is strongly rooted in Roman Pantheon; Marinka Palace built in 1790-94 for Maria Wirtemberska, Roman gate in the palace and park ensemble; the Greek house built in 1778-1791, which used to be an orangery but later converted into a municipal library; a Chinese garden house of the mid 18th century; a marble sarcophagus made in Rome and sent to Puławy in 1799 by Adam Jerzy Czartoryski; a sculpture depicting Tancred and Clorinda—the main characters in the sixteenth-century poem 'Jerusalem Delivered' by Torquato Tasso—comissioned in 1790 by Stanisław August Poniatowski to Francesco Lazzarini.

- Kazimierz Dolny is a town in river basin in the western part of Lublin Region. It can be accessed from Janowiec by car (25 km) or by ferry (5 km). In 2016, its population was approximately 2.5 thousand inhabitants.

Customs duty paid at the Vistula river crossing allowed for establishing an original settlement, which later developed into Kazimierz. Once Kazimierz was taken over by the king, Casimir the Great found a town here in the 14th century.

The town developed in the second half of the 16th century and resulted from a rapidly flourishing trade of grain, which was transported to Gdansk by the Vistula river. The most tremendous growth was in the first half of the 17th century. It was when the most important buildings in Kazimierz were constructed.

Since 1923, when Tadeusz Pruszkowski—professor in the School of Fine Arts in Warsaw—came with his students to practise landscape painting, Kazimierz has been teeming with artists. These attracted tourists and nothing has changed since then. In spite of considerable damage the town suffered in the Second World War, it was possible to reconstruct it - mainly thanks to the efforts made by Karol Siciński. At present, Kazimierz also attracts artists and art is what defines the town's image.

There is a great number of historic monuments and sites in Kazimierz, for instance: castle ruins with a fourteenth-century tower, St John Baptist church, St Bartholomeo church, St. Anna church and hospital, Order of Reformation church, Church of the Annunciation, a synagogue, as well as Celejowie and Przybyłowie tenement houses.

In close proximity to Kazimierz Dolny, there are castle ruins in Bochotnica.

- Nałęczów is a town in the western part of Lublin Region. It can be accessed from Janowiec by car (44 km) or by ferry (30 km). In 2016, its population was approximately 2.5 thousand inhabitants. Originally, its name was Bochotnica. Its history dates back to the turn of the eighth and ninth centuries, when a settlement was established on Poniatowski Hill. Later, the centre of the village was relocated to the top of the hill, where currently a parish church sits. In the early 14th century, Bochotnica parish was founded. It was also the century when the village was granted town charter, based on the German law. At present, there is a 25-hectare spa park in the heart of the town. It features a pond, several buildings and structures of historical significance, e.g. Małachowski Palace, 'Prince Joseph' Spa Resort, The Old Baths, The Porches, the Gothic House, as well as modern properties, e.g. the Spa House, the English Pavillion, the 'Farmer' Spa Resort, Atrium, and Palace Baths. Nałęczów is the only cardiological spa in Poland. Apart from being a spa town, it is also a summer resort. In the last few years, it has become more popular among tourists, at weekends and on holidays in particular.

- **Accommodation and restaurants**

According to data made available by Central Statistical Office, there were two guest houses in Janowiec in 2015, which could accommodate only ten visitors each.

Most guesthouses and hotels can be found in Kazimierz Dolny. There are only four restaurants in Janowiec - more of them are located past the road connecting Janowiec to Kazimierz Dolny and in Kazimierz Dolny alone.

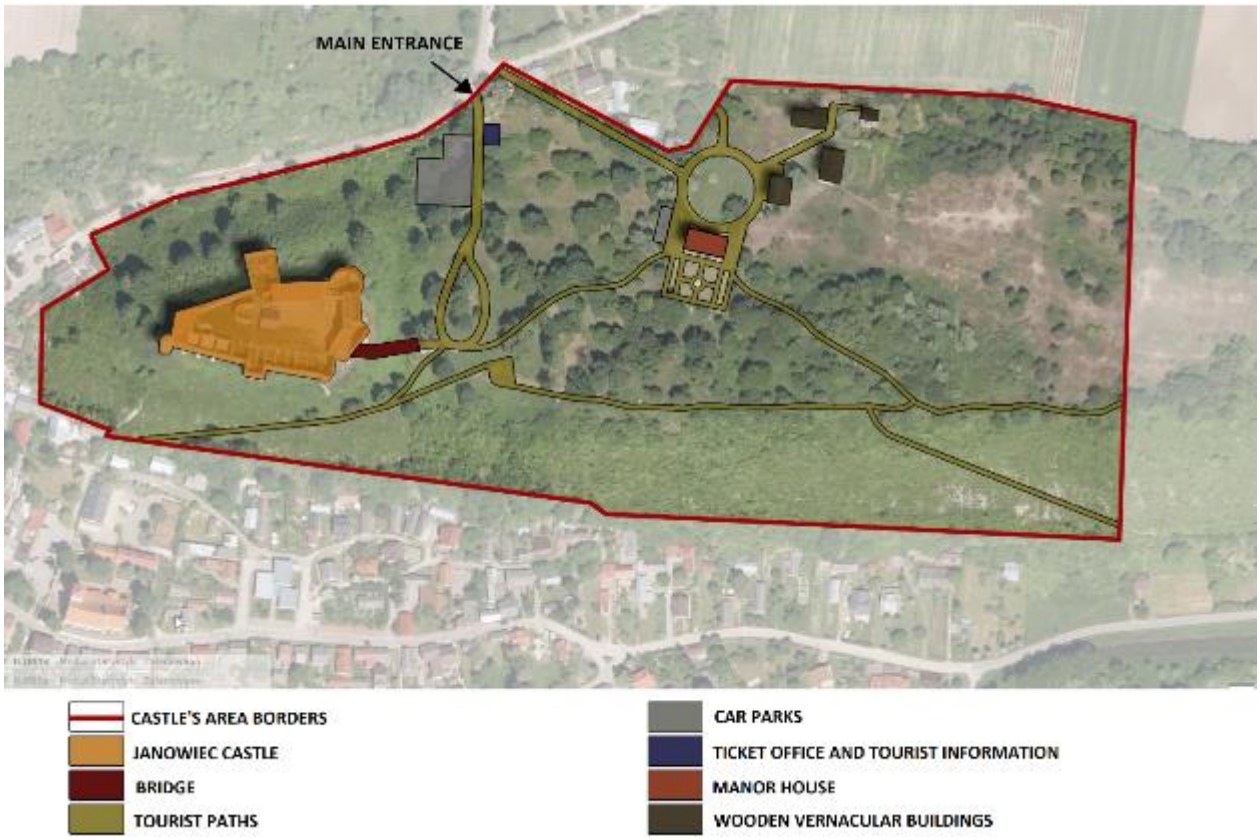
Picture 7 Accommodation in and outside Janowiec (source: maps.google.com)

Picture 8 Restaurants and bars in Janowiec (source: maps.google.com)

Picture 9 Restaurants and bars outside Janowiec (source: maps.google.com)

5. THE CASTLE AND ADJACENT AREAS

The castle premises cover the area ofapproximately 14.5 ha. They are situated on the hill of relative height of 30 meters above Janowiec. The castle is accessed by asphalt roads with load-bearing capacity suitable for both cars and coaches. The picture below shows how the Castle premises are managed



- **Entrance gate**

The Castle premises in Janowiec are accessed through the main gate on the main road. At the gate and right behind it, there is a car park information board, ticket office, and basic information for visitors.

Photo 1 Castle premises in Janowiec - the main gate

Photo 2 Ticket office and tourist information behind the main gate

- **Squares and car parks**

The Castle premises are provided with a car park. Due to more space being available at the main road, this area is intended for parking coaches. The car park at the Castle premises has capacity for 50 vehicles. Additionally, there are parking lots for property managers and castle staff. They are located at the bridge and the Castle manor.

There is a lot of open space in Janowiec museum, which is developed in different ways, e.g. there is a picturesque park located behind the manor house and green castle hills. Additionally, there is a square of considerable size behind the castle itself. It is not uncommon for museum administrators to organize concerts and other mass events on this square.

Photo 3 Satellite photograph showing car park behind the main gate

(source*: geoportal.gov.pl*)

Photo 4 Car park

Photo 5 Path from the car park to the museum

Photo 6 Green areas owned by the Nadwiślańskie Museum in Janowiec

Photo 7 Courtyard in the central part of the castle

Photo 8 Green areas in front of the castle premises in Janowiec

- **Tourist paths**

Information on all premises and tourist attractions is displayed in the ticket office at the main gate. Additionally, each edifice is provided with information boards. Only several paths are cobbled and adapted to tourist traffic. The other ones are not cobbled and run through green areas.

Emergency exits and parts closed to visitors are also marked appropriately in each edifice.

Photo 9 Parking sign

Photo 10 Information board - the history of Janowiec castle

Photo 11 Entry prohibited sign

Photo 12 Information on the sources of financing for preservation works carried out in the premises

Photo 13 Public toilet sign

Photo 14 Information on museum exhibition

Photo 15 No entry sign

Photo 16 No entry sign

Photo 17 Low ceiling sign

Photo 18 Emergency exit sign

- **Street furniture**
  - Properties in the castle premises:

The castle premises are abundant with street furniture: cafe garden (benches, tables, parasols), protection roofs, rails, balustrades, and stairs.

Photo 19 Cafe garden

Photo 20 Cafe garden - aerial view

Photo 21 Access restriction rails used for exhibition purposes

Photo 22 Access restriction rails

Photo 23 Protection roofs above the entrance to the castle

Photo 24 Ballustrades

Photo 25 Stairs for visitors

Photo 26 Visitor staircase

- Properties in the castle premises

There is a number of tourist paths in the area managed by the museum, along which benches and bins are installed. Several paths are provided with lamp posts. Additionally, there is a lapidarium in the park.

Photo 27 Bicycle stand behind the main gate

Photo 28 Lapidarium

Photo 29 One of the elements of the lapidarium

Photo 30 A bench in the green area

Photo 31 Trash bin in the castle premises

- **The premises of Janowiec Castle - the buildings**

The premises of Janowiec Castle include wooden vernacular buildings transported from adjacent towns and villages. They house exhibitions and are open to visitors. In the castle manor house, there are also rooms for members of staff of the Castle premises.

Photo 32 Manor house of Moniaki

Photo 33 Granary of Podlodów

Photo 34 Granary of Kurów

Photo 35 Barn of Wylągi

6. CASTLE'S STATE OF PRESERVATION

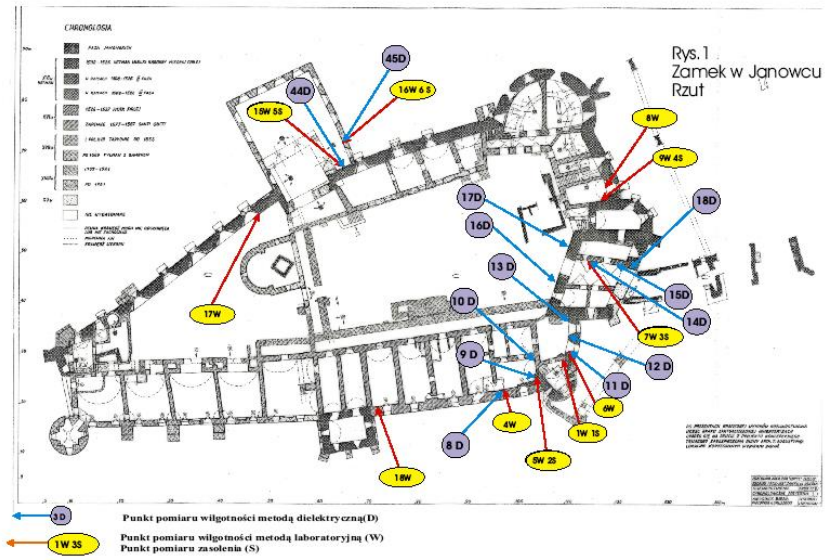
6.1. Studying and analysing ruins

In order to commence conservation, preservation and construction works in any property, appropriate studies and analyses must be conducted. Throught the years, a considerable number of in-depth analyses of specific elements of the castle was carried out. They were used for selecting appropriate solutions and techniques for preserving the subject property.

After analysing documents concerning Janowiec Castle, it was decided that the studies of the most considerable importance to properties of this type include:

- Ground and water instrumentation:
  - ground drilling and determining basic geotechnical parameters, including phreatic zone,
  - dynamic probing,
  - ground-penetrating radar surveys,
  - study of salinity and chemical composition of soil,
- analyses of stone and masonry elements:
  - macroscopic evaluation of masonry and mortar elements,
  - testing of moisture by applying indirect methods (dielectric, capacitive, chemical CM),
  - measuring moisture by conducting gravimetric analysis,
  - measuring salt content,
  - laboratory tests of wall compression strength,
  - ultrasound tests,
  - testing the pull-off strength of masonry and stone elements,
  - endoscopy tests,
- Analyses of wooden materials:
  - checking biological corrosion - macroscopic evaluation,
  - wood moisture testing by indirect method (dielectric, capacitive),
  - wood hardness test - using piledron, Janka method, using Presler bit,
  - wood testing by acoustic methods - ultrasonic, resonant, acoustic, computed tomography,
  - wood testing by radiological methods.
- Analysing detailing,
  - Determining the composition of plaster and mortar,
  - Analysing colours and layers, including richness of accumulated historical heritage.
- Analysing architectural detailing.

Over the years, a large variety of studies were conducted in Janowiec Castle premises. Due to their scope, it is not possible to provide all the results herein. Below, one can see where analyses of moisture and salinity—factors which affect construction elements and materials most significantly—were conducted.



Picture 10 Place of sampling for the study of moisture and salinity at Janowiec Castle.

In Janowiec castle, moisture was analysed by employing dielectric and laboratory testing. Dielectric testing, due to the results being excessively inaccurate, was only of informative nature and, therefore, helpful in sampling for laboratory purposes. Results of the moisture measurement with drying and weighing method are presented in the table below.

6.2. Documents concerning ruins

As it is commonly known, property protection involves, for example, producing documents concerning the properties being protected. In the last several years, a number of studies being of great use in preservation and maintenance of the subject premises were conducted in order to document the current condition of the property and determine its original condition. Conducting frequent studies and analyses allows for monitoring the premises and, hence, spotlighting damages and failures more quickly. Administrators of Janowiec Castle have a considerable number of different documents. The archive includes, for instance:

- historical study of the property and the surrounding area,
- archaeological documents,
- architectural documents,
- conservation and preservation documents,
- geodesy documents,
- geotechnical documents,
- documents concerning construction works,
- construction and structure documents,
- documents concerning fittings and systems,
- building and architecture surveys
- opinions, studies, expert opinions.

6.3. *Structure reinforcement*

Over the years, weather conditions have damaged every building being a part of the premises. This frequently results in changing physical and mechanical properties of the walls and, hence, their decreased load-bearing capacity. Janowiec Castle is severely affected by weather conditions in particular. Consequently, structural elements of walls, roofs and ceilings suffer considerable damage. In order to prevent it and make the subject premises pose less threat to visitors, several strengthening improvements were made. Strengthening improvements can be categorised according to their features:

A) The function being served:

- temporary - temporary reinforcement constructions aimed at preventing collapses or progression of failures.
- permanent - permanent reinforcement constructions intended to last for a long time and erected with a purpose of protecting the premises against failure or collapse.

B) Place of installation:

- Direct reinforcement of an element - direct reinforcement of an element which has been strained or load bearing capacity of which has been exceeded.
- Indirect strengthening of an element - very often, when safe bearing capacity of a structure is exceeded and results in unintended changes, the structure can be strengthened by changing the static scheme.

C) Origin of the material being used:

- Strengthening with original material - strengthening structural elements by using elements of historical significance extracted from a different, e.g. demolished, part of the building.
- Strengthening with non-original material - strengthening structural elements with contemporary material of known bearing capacity.

D) Strengthening improvements–the non-original ones in particular–can be categorised according to the material being applied. The most common materials applied in strengthening buildings: steel, wood, masonry, concrete and reinforced concrete, other, e.g. carbon fibre tapes.

Photo 36 North wall - strengthening improvements with non-original masonry material

Photo 37 Tie beam in east tower

Photo 38 Tie beam connecting walls in the northern part of the premises - changing the static scheme

Photo 39 Installing steel beams in the existing wall

Photo 40 Non-original ceramic brick - strengthening improvement of vaults and ceilings

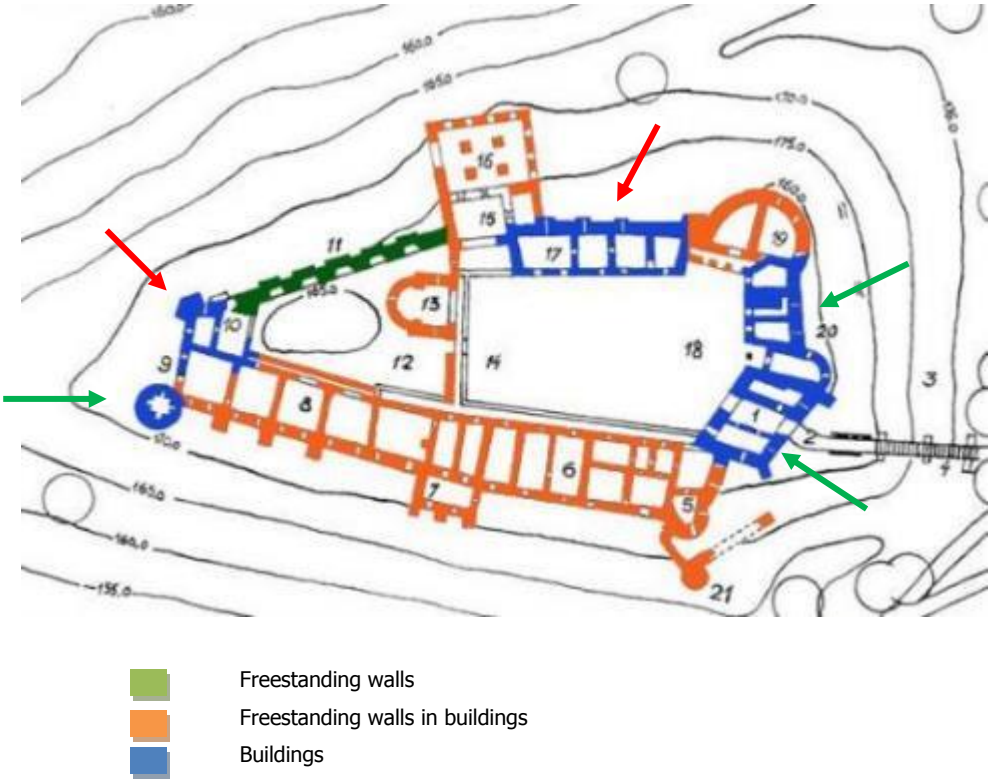
Photo 41 Laying concrete on non-original vaults with the purpose of improving their safe bearing capacity

Photo 42 Temporary strengthening of lintel with wooden elements

Photo 43 Steel tie beams connecting walls in Janowiec Castle - east part of the premises

6.4. *Buildings*

A building is a closed structure with cubic capacity. All buildings in Janowiec Castle are reconstructed. Two types of buildings can be distinguished: past reconstructions (green arrows) and contemporary reconstructions (red arrows).



Picture 11 Janowiec Castle - floor plan showing different structural elements

Photo 44 Janowiec Castle - aerial view (source: wikipedia.org)

6.4.1. Buildings - historical reconstructions

Building in the east wing of the premises. The reconstructed building is founded on original walls. It is currently used on its ground floor only - in the northern part there is a restaurant and in the main part - guest and stock rooms. Arcades on the 1st, 2nd, and 3rd floors are open to visitors.

Photo 45 East wing in 1976, overlooking the Grand Courtyard. Photo: J. Żurawski, 1976.

Photo 46 East wing in 1976, overlooking the Grand Courtyard.

Photo 47 East wing: arcades in 2017.

Photo 48 East wing in 1976, overlooking the Grand Courtyard.

Gate house: Originally, the gate house consisted of two parts: the gate house and the guard house. The subject building was reconstructed and the ground floor covered with ceiling. The building houses a ticket office, souvenir shop, small exhibition room and security officer room.

Photo 49 Gate house facing North-East; 1975.
Photo: Regional Historic Preservation Office in Lublin

Photo 50 Gate house facing the courtyard; 2017.

Photo 51 Janowiec Castle facing the East (entrance). Caponier remnants can be seen in the moat. Photo: K. Stefański, c.a. 1900. Institute of Art - Polish Academy of Sciences

Photo 52 Gate house facing the bridge; 2017.

East tower: In the 1980s, a number of strengthening improvements (braces and steel tie beams), construction works (new windows and roofs) as well as preservation works (preserving Baroque ornaments) were carried out. Further finishing works need to be conducted in the tower. At the moment, the building serves no particular purpose. For safety reasons, the moulded room is closed to visitors.

Photo 53 East wing in 1976, overlooking the Grand Courtyard. Photo: J. Żurawski, 1976.

Photo 54 Steel tie beams connecting walls in Janowiec Castle - east part of the premises

6.4.2. Buildings - contemporary reconstructions

The North House: The building was erected at once. The structure itself does not feature many elements of historical significance. Currently, the North House is used for museum purposes and houses an exhibition room, staff room and toilets for castle visitors.

Photo 55 The North House

Photo 56 Mock-up of Janowiec Castle; The North House

Photo 57 Conversion plans - exhibition in the North House

Apartments in the west wing. It was planned to carry out extensive adaptation works in the west wing in order to convert it to hotel use. The works commenced in the 1980s and involved: strengthening of the existing structure, replacing ceilings, and erecting new dividing walls. The works have never been completed and, hence, the building is closed to visitors.

Photo 58 Janowiec Castle: the west wing

Photo 59 Moulding of historical significance - temporary protection for the time of renovation works

Photo 60 Replacing ceilings with contemporary Ackerman ceiling installations.

Photo 61 Repairing walls with ceramic solid brick - non-original material

Photo 61 Dividing walls made of ceramic solid brick - non-original material

6.5. *Protecting external face of the walls*

Contemporarily, general guidelines about preservation and conservation of the face of the walls of permanent ruins involve preventive conservation resulting in preserving the original design of the building and its elements of historical, technological, and aesthetic importance accumulated in different periods.

Issues concerning preservation and repair of the face of the walls in buildings of historical significance pertain to:

- providing them with full protection by preserving and protecting the stone and brick elements, mortar, and plaster.
- reducing the extent of works which may have an impact on the building through selecting materials whose structure and properties are similar to the original ones (this is possible after conducting detailed historic preservation and conservation studies),
- removing only the elements which may have deleterious effect on the original ones,
- satisfying the requirement of authenticity through providing protection against deleterious effects and removing their causes immediately after the wall is affected.

6.5.1. Face of walls - protective solutions

Walls in castles, which have a specific structure and were built several hundred years ago, require certain approach in terms of repair, i.e. the masonry material and connections between particular elements. Therefore:

- displaying how thick a wall is by adding partial masonry elements and anchoring. The displayed parts of the inner wall are repaired by applying grout; the original shape is not preserved. In ruins, the face of the inner walls is not reconstructed.
- Grout cracks in walls with preserved faces are filled, without replacing the original ones, in spite of their profiles being hollowed out.
- Fillings of larger cracks should be clearly different from, yet integral with, the existing elements. Interconnections between the new and old layers should be marked appropriately with a so-called ‘border’. In brick walls, faces of which are rebuilt with machine-made brick, the problem turns out to be a self-resolve event as this type of brick gets patinated slowly and differently. It must be, however, remembered to apply the right colour and match the height of new bricks to the existing ones.
- Repairs in stone walls - the same type of rock must be selected and, as it gets patinated very quickly, it is necessary to emphasize the border between the old and new parts. Alternatively, it is possible to apply grout of different colour or stud it with stripes of lead or zinc steel.
- In cyclopean masonry, particularly in structures which were plastered immediately, scooped grout replaced profiled grout.
- With regard to glacial erratic, similar methods are applied. It must be, however, remembered to restore small stones which were flushed out with the mortar.

6.5.2. Janowiec Castle - protecting the face of the walls

South suite of rooms, east part (Andrzej Firlej Palace) - cavities and gaps in ground floor walls were repaired, levelled off, filled with lime stones, joined with lime mortar, and left in permanent ruin.

East wing - external wall of the arcades facing the courtyard was reconstructed. Cavities and cracks in other walls were repaired. Above loopholes in the external, east-facing wall of the building, new parts of wall were made of ceramic brick joined with strong Portland cement mortar.

North wall - wall cavities were repaired with dressed lime stones; The difference between the native and foreign materials is clearly visible. Brick and cement mortar were used in arch reconstruction.

Foregate - walls made of lime stones joined with lime mortar.

Tab. 1 Janowiec Castle - protecting the face of the walls

Protection solutions applied to the face of the walls	Location in the premises
new layers of brick added to the existing masonry	YES
displaying wall thickness	YES
repairing cracks in grouts	YES
repairing stone walls with native material	YES
repairing stone walls with contemporary brick	YES
repairing stone walls; the original and contemporary elements must be easily distinguishable.	YES

Photo 62 The north wall: repairing the face of the walls from the inside of the building

Photo 63 The reconstructed and the original parts of the north defence wall.

Photo 64 Wall of the Servants' building - north part of the castle. The repairs made in the lower parts are in satisfying condition. The face of the wall is degraded at the junction with the calcite crown.

Photo 65 The wall of the Grand Bastion - north-east part of the castle Damaged part of the wall which was already a subject of preservation works.

Photo 66 The wall of the Grand Bastion - north-east part of the castle Cement-based mortar used for repairing the falling-off face of the wall.

Photo 67 East tower Original parts of the walls are considerably damaged; the condition of the reconstructed upper part is satisfying.

Photo 68 South suite of rooms

Photo 69 South suite of rooms - damaged grouts and stone and masonry material.

Photo 70 South suite of rooms - the face of the walls and plaster are considerably damaged where the original part of the wall conjoins the calcite coping.

Photo 71 West tower - damp and defects on the face of the wall where the tower conjoins the west wing.

6.5.3. The face of the walls - condition analysis

In most buildings and structures, faces of the walls are in poor condition. Leaky wall coping resulted in damp patches, which inflicted extensive damage to the faces of the walls - to the north wall and to the south suite of rooms in particular. Faces of the walls are also considerably damaged where cement mortar was applied.

The condition of new layers of limestone added to the east part of the south suite of rooms (Andrzej Firlej Palace) is also alarmingly bad. Only after one winter season outter layer of mortar peeled off (parts of 2-8 mm thickness). At the moment, the layer of mortar is loose and of wet sand colour. The stones are loose, not joined, and fall off the wall. It seems that mortar of poor quality—for instance consisting of frostbitten

lime—was applied. The wall is falling apart and needs to be rebuilt. The wall above the viewing balcony in the south-east corner of the gate house is in similar condition.

Walls are also corroded in the building situated in the east wing. Bricks are falling apart, mortar is cracked. These parts need to be rebuilt with freeze-proof brick and joined with strong lime mortar.

Only a few fragments made of dressed lime stone and brick joined with lime mortar are in acceptable condition. This, however, pertains only to places where coping is protected appropriately.

6.6. Wall coping

A considerable number of stand-alone walls rising above grade level is a distinctive feature of permanent ruins. These include both originally stand-alone walls and remnants of derelict buildings. As these structures are provided with no protective elements, adverse conditions have profoundly damaging impact on them. Therefore, they are quickly damaged over time and the deleterious effects are much more far-reaching than in other properties. As wall coping covers and protects lower parts of walls and it the part suffering the most considerable damage, it is of utmost importance to provide it with adequate protection.

6.6.1. Wall coping protection measures

Measures aimed at protecting wall coping can be grouped under several categories in which the following aspects are taken into account: the type of materials being used (native and foreign), contemporary stamp of restored elements which must be distinct from the original elements of historical significance, reversibility and removability of protection works. Techniques most commonly applied in Poland include:

- Adding new layer of brick to the existing masonry by using native or foreign material. This involves bonding-in of new masonry material in the upper part of a wall and shaping the surface of the face of the wall appropriately.
- Insulation - applying horizontal insulation, e.g. metal sheets, tar paper, foil, etc., and adding a new layer of brick to the existing masonry if needed.
- Roofing - adding a removable structure protecting wall coping against precipitation. Although lacking artistic value or beauty, they are a durable solution. Roofing can be classified under two categories. Most frequently, roofing is either a temporary structure protecting particularly damaged parts of walls or a group of permanent structures provided with alleys allowing visitors to walk along wall coping.
- green layer - involves covering wall coping with vegetation and a growing medium, e.g. grass, planted over a waterproofing membrane.
- protecting wall coping with chemical, e.g. hydrophobic or sealing, preparations.

Before any of the above-mentioned techniques is applied, a wall of historical significance needs to be prepared appropriately. Loose masonry material and mortar remains should be removed from the parts of walls to be protected; the largest holes and cracks should be repaired and unwanted vegetation should be removed from wall coping.

Most frequently, these techniques are combined, e.g. insulating a wall of outstanding historical value and adding a new layer of brick to the existing masonry or insulating a wall, adding a new layer of brick to the existing masonry and covering wall coping with vegetation.

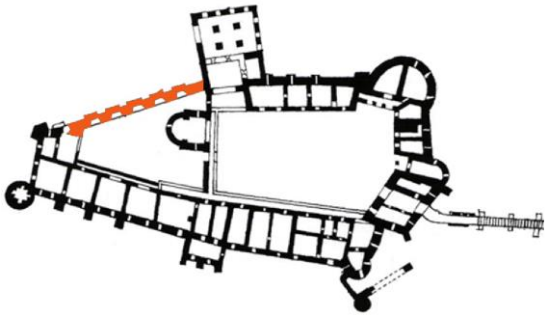
6.6.2. Janowiec Castle - protecting wall coping

In Janowiec castle, several wall coping protection methods have been applied. Nevertheless, there are still some fragments which have not been provided with any protection. Castle analysis showed several different protection methods having been applied: adding a new layer of brick to the existing masonry material (type 1 - slope profiling and type 2 - adding foreign material), covering structures with steel sheets, bituminous materials, ceramic roof tiles, and concrete elements. During inspection, it was found that no technical-green method and no chemical preparations were applied to the fragments where, below the added layer, insulation materials were laid.

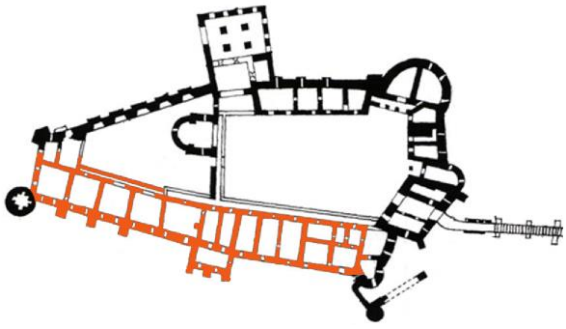
Tab. 2 Janowiec Castle - protecting wall coping

Wall coping protection techniques	Location in the premises
non-protected wall coping	YES
adding a new layer of native brick to the existing masonry	YES
adding a new layer of foreign brick to the existing masonry	YES
insulating the structure and adding a new layer of brick to the existing masonry	NO
insulating a structure only, without adding a new layer of brick to the existing masonry	YES
roofing	YES
green layer	NO
Chemical preparations	NO

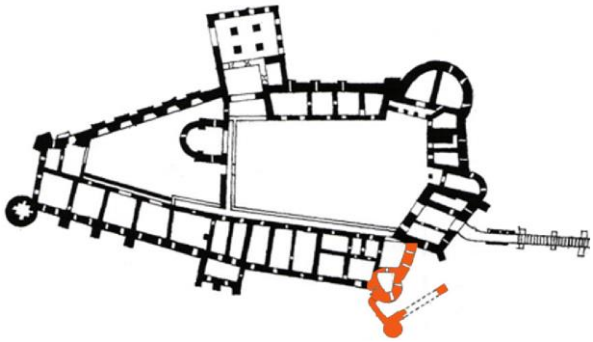
6.6.3. Location of walls with protected coping



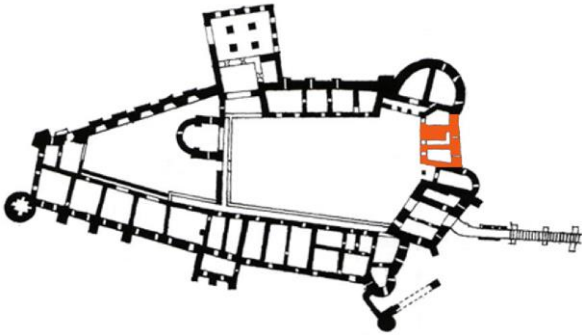
Picture: 12 Janowiec Castle - the north defence wall Wall coping: foreign calcite stone and ceramic brick used for rebuilding the inner and outer parts respectively



Picture 13 Janowiec Castle - the south suite of rooms External and internal wall coping in the western part: rebuilding with foreign calcite stone Internal walls in the east part of the premises: no protection provided.



Picture 14 Janowiec Castle - East Bastion. Wall coping protection: a new layer of brick added to the existing masonry, ceramic roofing, and steel sheets.



Picture15 Janowiec Castle - west part. Wall coping protection: ceramic roofing.

Photo 72 Wall coping protection - a new layer of foreign material added to the existing masonry

Photo 73 Wall coping protection - a new layer of native material added to the existing masonry; Ceramic roofing installed.

Photo 74 Wall coping protection - a new layer of foreign material added to the existing masonry; Ceramic roofing installed.

Photo 75 Wall coping protection: wooden structure and bitumen waterproofing

Photo 76 Wall coping protection in excavated basement: wooden roofing

Photo 77 Wall coping protection: flat steel sheet

Photo 78 Horizontal insulation; no new layer added to the existing masonry

Photo 79 Adding a new layer of native material to the existing masonry; no roofing provided

6.6.4. Wall coping - condition assessment

Poor technical condition of wall coping in the part provided with no protection. Numerous cracks, cavities, and loose masonry material can be noticed. Precipitation gets into coping and damages walls from the inside. As elements of coping may fall off, this part of the castle is closed to visitors. Walls provided with no protection are covered with perennial and annual vegetation.

In most cases, protection works involved adding a new layer of coping to the existing walls. At present, coping protected with calcite is the most pressing problem. Although hard stones joined with strong mortar prevent precipitation falling directly on wall coping from getting into the wall, they fail to protect elements of historical significance against water flowing accross protection and getting into junction layers. Original layers are damaged more substantially where calcite elements were joined with weak mortar. There was no order as to installing roofing. Flat steel sheets, corrugated steel sheets, ceramic roof tiles, tar paper, and concrete elements were applied.

Tab. 3 Wall coping condition assessment for Janowiec Castle

Type of protection	Condition of the protective element being applied	Condition of the wall beneath the protective element
wall coping provided with no protection	-	UNACCEPTABLE Extensive damage to mortar and masonry material
Adding a new layer of native material to the existing masonry and providing no roofing	ACCEPTABLE	UNACCEPTABLE Damage to the wall of outstanding historical value at the junction with the new layer of material added to the existing masonry
adding a new layer of native material to the existing masonry and providing roofing	VERY GOOD	VERY GOOD
adding a new layer of foreign material to the existing masonry	ACCEPTABLE	UNACCEPTABLE Damage to the wall of outstanding historical value at the junction with the new layer of material added to the existing masonry
insulating a structure only, without adding a new layer of brick to the existing masonry	VERY GOOD	VERY GOOD
roofing - steel sheet	GOOD Steel sheet corrosion in certain places	VERY GOOD
roofing - wooden structures covered with tar paper	UNACCEPTABLE Temporary roofing structures made of impermanent materials have been damaged	ACCEPTABLE Wall damaged where protective elements have been damaged.

6.7. Drainage and rainwater discharge

In permanent ruins of historic monuments and sites, it is of utmost importance to provide appropriate drainage and rainwater discharge. As properties of this type are usually located on hills and far outside urban areas provided with drainage and lightning protection systems, it is particularly difficult to deal with this issue. Additionally, what is also problematic is the fact that in properties bounded and enclosed by walls, rainwater remains within the confines of the property.

6.7.1. Water drainage installations for roofs, terraces, and ceilings with no roof provided

- drainpipes,
- outlet pipes,
- roofing elements,
- gargoyles,
- linear drainage,
- inlets,
- other

6.7.2. Surface drainage solutions.

- underground drainage solution
  - drainage systems,
  - storm drain
  - sewerage systems,
- surface drainage,
  - U-channels with surface mount base,
  - U-channels made of plastic, stone, and monolithic and prefabricated concrete.
  - covered linear drain.

6.7.3. Drainage facilities

- wastewater treatment plants,
- drainage ditches,
- wet and dry moats,
- surface infiltration,
- underground containers.

6.7.4. Drainage and rainwater discharge in Janowiec Castle

- To remove rainwater from roofs, a system of drainpipes and outlet pipes is used. Outlet pipes are either connected directly to the storm drain or convey water away from the building.
- In buildings which are not provided with roofs (east part of the castle), water is conveyed along specifically shaped ceilings and away from the side of a building through gargoyles.
- In the grand courtyard, rainwater is removed through the storm drain. Although the courtyard is provided with few drain grates, they are installed in wrong places and in a wrong manner. One grate is installed far above grade level. Topography of the area and insufficient number of frain grates results in rainwater being channelled toward the outter walls and ingressing into their fabric.
- Surface of the minor courtyard is irregular, rainwater is infiltrated into soil and, in the south-facing part of the castle, water accumulates at the foot of the wall.
- In the courtyard, a piezometer is installed in order to control ground water level.

Photo 80 Leaky elements of the drainage system result in the corner of the building being damaged.

Photo 81 Metal elements fail to cover the cornice

Photo 82 Outlet pipe connected to the storm drain system

Photo 83 Removing water from the ceiling

Photo 84 A gargoyle conveing water from profiled floors

Photo 85 Gargoyles conveying water away from the building onto the courtyard

Photo 86 Gargoyles conveying water into the grand bastion. Water accumulates directly at the foot of the walls.

Photo 87 Gargoyles conveying water away from the castle

Photo 88 Rainwater accumulation in the basement of the servants' building

Photo 89 Damaged roofing which covers the basement of the south suite of rooms

Photo 90 Drain grate located above grade

6.8. *Protection of architectural detailing*

There are four types of historic architectural detailing in Janowiec Castle:

- stone detailing
- stuccoing detailing
- plaster
- polychrome paintings and sgraffiti

6.8.1. Stone detailing

Renaissance and baroque door portals built in different periods have been preserved.

East wing - in 1994, black marble Baroque-style portal was preserved and temporarily placed at the entrance to the ground floor room. In 1995, following preservation works, two marble Baroque- and two Renaissance-style marble portals were installed on the first and second floors respectively.

Photo 91 Baroque-style black marble portal; east wing

Photo 92 Baroque-style marble portal; first floor in east wing

- **Stone detailing - condition assessment**

All stone portals in the arcades are well-preserved. Only the black marble portal needs immediate protection against precipitation, e.g. a small polycarbonate roof.

6.8.2. Moulding

Historical and architectural analyses showed that in the early 17th century, members of the Tarło family conducted extensive construction works and rebuilt Andrzej Firlej palace. It was also when a new, west part of the south suite of rooms was built and flanked in the west-facing part with a cylindrical tower. Therefore, what was built between the towers, was the south suite of rooms of considerable size, with features typical of late mannerism, a new window layout, and ceremonial halls richly decorated with moulding and wall paintings. Judging by the remnants of these ornaments, it can be stated that they were made by professional and talented artists. In the west tower, moulding of external window frames started to crumble and fall apart. Damage rate of wall and vault ornamentation was 40%.

South suite of rooms: In 1988 and 1989, preservation works on window frames decorated in Rococo style were carried out in the west and east part of the suite of rooms respectively. In the period of 1995-1996, remnants of Baroque wall moulding in the west part of the suite of rooms and adjacent room being a part of the west apartment were preserved. Light policarbonate roofs were stretched over the entire architectural detailing. The most considerably damaged elements—falling off the wall when touched—were provided with light lime and sand mortar—similar to the original one—and preserved with agrifiber. Additionally, the preserved detailing was provided with styrophoam and polymer lamination screens attached to a wooden frame. Their purpose is to protect the elements of historical significance against sun, frost, microflora, etc., until reconstruction works are relaunched.

West Tower - in the period of 1986-87, preservation works aimed at protecting moulding in the room decorated in Baroque style were carried out. In 1997, conservation works were complete and, as a result, moulding in the said room was partly reconstructed.

Photo 93 South arcades: roofing above moulding

Photo 94 West apartment: moulding provided with wooden support

Photo 95 South suite of rooms: moulding provided with polycarbonate roofing

Photo 96 South suite of rooms: moulding provided with light sand and lime mortar

Photo 97 West tower room: moulding after conservation works

- **Moulding: condition assessment**

In most cases, moulding is well-preserved. Preservation materials and methods proved to be effective. Recently, only the polycarbonate roofs protecting walls against precipitation have been replaced.

6.8.3. Plaster

Chips of vermilion plaster were found along the east wall of the grand bastion. Together with relics still displayed on the walls, they prove that in the early 16th century, i.e. in the first phase of castle construction works, the entire east part—stretching from the east fortified tower (puntone) to the bastion—was decorated with thirty-centimetre horizontal white and vermilion stripes. In the part facing the Grand Courtyard, external walls of the gate house provided with the bastion were ornated in the same manner. The stripes were painted on a thin, carelessly smoothed lime floating coat which covered the stonework. This resulted in strong tonal contrasts between light and dark to model three-dimensional forms. This kind of decor is uncommon in Polish modern military architecture. It is an exception which may nowadays shock with its aggressive artistic expression. Judging by the decoration, it can be assumed that some of the castle

construction works commissioned by Mikołaj Firlej were supervised and conducted by Italian artists. The reason behind this assumption is that external walls decorated with horizontal stripes—through using construction material of different colours—were deeply rooted in ancient Italian tradition.

Gate house: in 1992 and 1993, plaster was repaired and decoration of the external walls, i.e. white and vermillion horizontal stripes painted alternately, was reconstructed on the basis of preserved fragments.

East wing: in 1993, finishing works were carried out: interior plaster

South suite of rooms: in the period of 1995-1996, remnants of plaster on the walls in the west part of the suite of rooms and the adjacent room in the west apartment were recorded and preserved.

Photo 98 Gate house: re-plastering of a part of the face of walls; reconstructing decorations according to elements that remained from the past

Photo 99 Gate house: plaster scaling

Photo 100 East wing: interior plaster

Photo 101 Plaster on the grand bastion provided with no protection

Photo 102 South suite of rooms: condition of the plaster

Photo 103 South suite of rooms: plaster protection

- **Plaster condition assessment**

General condition of both original and reconstructed plaster is poor. They require taking immediate preservation actions. Precipitation causes cracks and blistering. As a result, brittle plaster falls off most walls . In lower parts of walls, plaster is damaged by crystalizing salt.

6.8.4. Sgraffiti and polychrome paintings

As part of architectural studies, remnants of sixteenth-century sgraffiti decorations depicting figures and displayed on the east wall in the east wing were recorded in museum documents. What was also investigated and recorded were different sgraffito layers depicting prism rustication and painted on the south wall in the east part of the premises. The older layer was a part of decorations in Andrzej Firlej palace and, hence, can be dated late 1570s. The other layer, however, was made in the late 1640s and is associated with the House of Tarło, members of which rebuilt the palace in that period. Calcareous white and burnt sienna are the colours of all sgraffito decorations.

West tower: in 1997, when moulding reconstruction works were carried out, shield wall al fresco paintings enclosed in oval frames were preserved as well.

Gate house: preservation works were carried out on the east wall - moulding of the pseudo-sgraffito decoration depicting halaberdiers was reconstructed and preserved.

South suite of rooms: in 1992, a part of the attic adjacent to the east tower was repaired. The works involved reconstruction of colours and preservation of sixteenth- and seventeenth-century sgraffito decorations depicting prism rustication.

Photo 104 Reconstructed sgraffito frieze depicting halberdiers

Photo 105 West tower: al fresco wall paintings after preventive conservation works

Photo 106 Gate house: reconstructed face of the walls - wide, horizontal, white and vermilion stripes

- **Sgraffiti and polychrome paintings - condition assessment**

South suite of rooms: Precipitation and chemical substances contained in rainwater inflicted considerable damage on polychrome paintings.

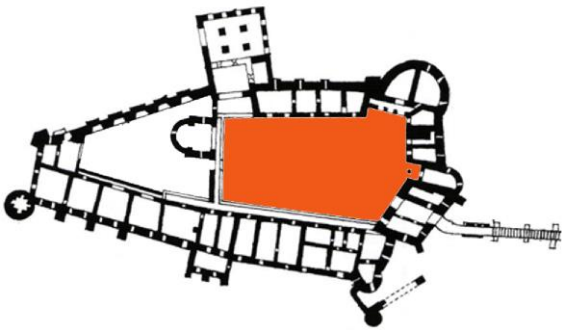
Wall paintings enclosed in oval-shape frames on shield walls in the west room are in good condition.

6.9. Other buildings and elements of the premises

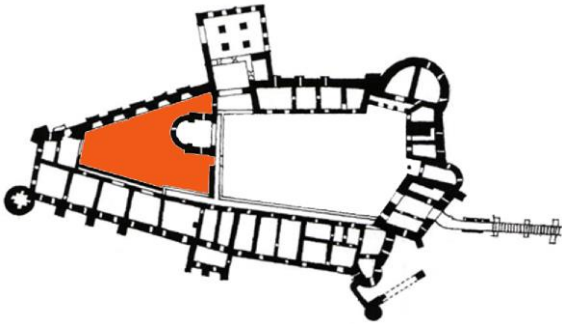
Civil engineering structures include:

- courtyards
- roads and passageways - condition assessment covers both historic routes and the ones which were introduced in the spatial management process
- bridges
- wells
- underground trails
- ground and stone fortifications
- moats
- other

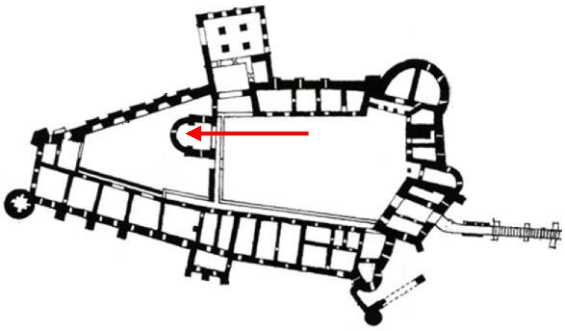
- **Engineering structures in Janowiec Castle**



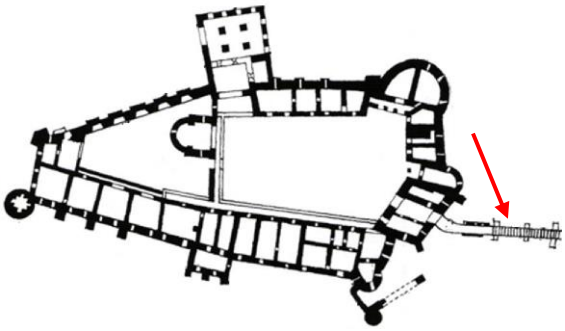
Picture16 The grand courtyard highlighted on the floor plan



Picture 17 The minor courtyard highlighted on the floor plan



Picture18 The well highlighted on the floor plan.



Picture 19 The gate bridge highlighted on the floor plan

6.9.1. Courtyards

- The grand courtyard Current condition: non-original. The courtyard is cobbled only in its north part. The non-cobbled surface is covered with grass. There are buildings located in the east and north parts of the courtyard. In its south part, the courtyard is provided with barriers. The west part of the grand courtyard is separated from the minor courtyard with chapel walls and a gated fence.
- The surface of the minor courtyard, where debris, remnants of construction materials, and excavation soil can be found, is non-cobbled. No sewage inlets available.

Photo 107 The grand courtyard

Photo 108 The minor courtyard

- **Bridge**

Janowiec Castle premises are provided with a bridge heading through the moat to the main gate of the castle. The bridge is non-original. Pillars, stiffeners, and frame sections are made of rolled steel. The roadbed is made of ten-centimetre-thick wooden squares.

Photo 109 Bridge heading to the castle

Photo 110 Bridge facing the moat

- **Well**

The castle well is located inside the chapel. At the moment, it is provided with a permanent cover made of steel and concrete. Above the cover, there are several pipes which are presumably used for bleeding purposes.

Photo 111 Castle well

- **Moats**

Due to plot topography, it was not possible to surround the entire castle with a moat, which can be therefore found only in the east. A dry moat is usually a broad ditch dug in the ground. Only at the bridge heading towards the gate house, the wall is partly displayed. As the present structure of the bridge is of contemporary origin, most presumably, the parts of walls used to be the part of support of the former bridge. In the closest proximity to the bridge, the depth of the moat is seven metres. Currently, in most parts, the moat is filled with soil and rubble and covered with annual and perennial plants.

Photo 112 Castle moat

Photo 113 The moat facing the bridge

6.10. Vegetation

Vegetation is an inherent element of permanent ruins. In properties of this type, there are areas of cultivated vegetation compositions, 'wild' loose plants which, over time, became inherent part of the ruins, as well as places where unwanted or even damaging greenery grows.

6.10.1. Cultivated compositions and loose vegetation

- **Castle courtyards**

Castle courtyards, except for the cobbled parts, are covered with grass. Lawns are mown on regular basis. Condition of turf varies. On the minor courtyard (closed to visitors), grass is thicker and in better condition than grass growing on the grand courtyard, which is frequently visited by tourists. Lawns at the remnants

of the south suite of rooms and the servants' building are in far worse condition. They are rarely mown and the mown grass is left unattended. No bush or trees can be found across the courtyards.

Photo 114 The grand courtyard

Photo 115 The minor courtyard

Photo 116 Courtyard at the servants' house

- **Castle hill**

Originally, the moat and the slopes were covered with grass and grass-like plants. After the castle was no longer used for defense purposes, it was becoming a ruin and trees started to grow on the slopes. In 1995,

the last felling took place as a result of which nearly all trees growing on the hill were downed. Before 2015, maintenance works were carried out on the slopes. Consequently, the entire south-facing slope was displayed, including the pathway heading to the town. At the moment, both the dry moat and the slopes are covered with bush and small trees. It is necessary to carry out further maintenance works.

Photo 117 South wall - aerial view over the castle Picture taken after completing maintenance works; February 2015

Photo 118 Aerial view over the castle. Single trees on the slope. June, 2016. Source: http://youtube.com

Photo 119 Dry moat. Mown grass at the foot of the castle hill. Moat covered with grass.

- **Park**

In the 1980s, along with conservation works in the castle, a number of maintenance works were carried out in the green areas around the castle, including the adjacent park. In the first stage, ancient forest was cured, pathways were made, plants and bush were planted. At the moment, the park and its surrounding area are well-maintained, the grass is mown on regular basis, pathways and roads are being renovated, trees are in good condition.

Photo 120 Ancient forest between the manor house and the castle

Photo 121 Linden - natural monument in the park in Janowiec

Photo 122 Vegetation compositions in the park at the manor house of Moniaki

Photo 123 Vegetation compositions in the park at the manor house of Moniaki

6.10.2. Unwanted vegetation

Even the slightest amount of hummus in wall cracks and coping results in plants spreading into there. At the beginning, these are predominantly grass and small annual and biennial plants. High humidity stimulates their growth. Their decay results in production of humic acid and increase in the level of nitrates. Over time, as humic layer gets thicker (plant decay, accumulation of drifted soil), perennial plants, bush, and trees start to grow. Both standard and dwarf plants exert similar impact on buildings. Additionally, roots can grow under walls causing cracks and lifting them up.

In Janowiec Castle, elements mot seriously affected by unwanted plants are walls. Dwarf plants, bush, and small trees are present. Vegetation can be seen at the foot of the castle walls, on elements projecting outside the walls, and the coping itself. Thick high bush also grows in the dry moat and on the slopes of the castle hill.

Photo 124 Young trees on the north wall coping

Photo 125 Rambling plants in the corner of the grand courtyard

Photo 126 Perennial plants and young bush at the foot of the wall of the grand bastion

Photo 127 Plants on the projecting element of the east wing

Photo 128 Bush growing in the moat.

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