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Fig. 1 City of Graz Park, 2024

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Historical and Spatial Development of City of Graz Park (Block 21), Pula, Croatia

archaeological integration
City of Graz Park (Block 21)
Kolacio, Zdenko
landscape heritage
Pula, Croatia
urban heritage

The article analyses the historical and spatial transformation of Block 21 in Pula, currently occupied by the City of Graz Park. The aim is to trace the site's development from antiquity to the present day and examine the layered changes in its urban and landscape structure. The methodology combines the analysis of historical maps, archival documents, conservation and urban planning studies, as well as field research. Particular attention is given to the impact of World War II destruction, the post-war landscape concept by architect Zdenko Kolacio, and subsequent planning documents. The research shows that while the area has retained ecological value, its spatial structure and historical legibility have significantly changed. The findings contribute to a deeper understanding of the area's urban development and provide a basis for further study of its urban, architectural and archaeological context.

Introduction

The city of Pula has a continuous settlement history spanning over three millennia: from the proto-urban settlement of the Ilirian tribe Histri, through the Roman and Byzantine periods, the medieval commune, to the Austro-Hungarian main naval war port and the modern city. This layered urban development is still legible today, making Pula a rare European city whose historic core preserves architectural remains from all of these eras (Krizmanić, 2005: 113).

Within this complex urban palimpsest, the City of Graz Park[1] – also referred to, in conservation and planning documents, as Block 21 – stands out as a spatial fragment shaped by both continuity and rupture (Modus d.o.o, 2016). Once densely built and integrated into the compact historic urban core, the area was almost entirely demolished at the end of World War II and later transformed into a green public space. The block is located within the protected zone of Pula's historic centre[2], adjacent to the main city artery and the former medieval wall, and described in planning documentation as "an important link in the development of the urban structure" (Modus d.o.o, 2016).

Block 21 is defined by Sergijevaca Street[3], Benedictines Abbey Street[4], Flacius Street[5], and St. Nicholas Passage[6]. Historically, Tradenik Street[7] (today, only roughly visible as a pedestrian connection through the park) went through the middle of the block in the east-west direction. Therefore, historically, there were actually two building blocks. The area is situated between the Old Market[8] to the west and, and to the east, Block 22 through which *Vicolo della Bissa*[9] extends diagonally toward Tradenik Street (Fig. 2).

This article traces the historical and spatial transformation of Block 21 from antiquity to the present, with a particular focus on the evolution of its landscape structure. Relying on an interdisciplinary analysis of archival materials, cartographic sources, archaeological data, and field research, the study offers a chronological reading of the area's transformation. Critical evaluation of certain historical layers will emphasize the identified desir-

1 In this article, the name "Park Graz" will be used for the "City of Graz Park"

2 The area of Block 21 in Pula is not a listed cultural heritage property, but it is located within the boundaries of the cultural heritage complex "Cultural and historical entity of the city of Pula" (registration number Z-5638; Decision of 8 November 2012) (NN 46/2013).

3 The street has changed names throughout history. The first recorded name was in 1862 when it was called *Gasse*, and one part of it was called *Via Misericordia*. From 1869 to 1872, parts of the street were called *Via San Francesco*, *Via del Teatro*, *Via Portaurea*. From 1889 to 1938, it was called *Via Sergia*, in 1948, *Ulica Boraca*, in 1952, *Ulica Prvog Maja*, from 1956 to 1961 it was called *Ulica Prvi Maj*, in 1970, *Prvomajska ulica*, and in 1976 again *Ulica Prvog Maja*. Today, it is called *Ulica Sergijevaca* (Sergijevaca Street) (Krizmanić, 2008a: 293).

4 From 1869 to 1923, the street was called *Via Abbazia*, in 1938 *Via dell' Abbazia*, and in 1948 *Opatijska ulica* (Krizmanić, 2008a: 136-137).

5 Flacius Street (*Flacijusova ulica*) was named after Matthias Flacius Illyricus. In 1869 it was called *Piazza della Riva*, in 1886 *Corsai della Riva* (part) / *Riva del Mercato* / *Contrada dell'Arsenale*; in 1912 it changed its name to *Via dell'Arsenale*, and in 1916 to *Via Francesco Ferdinando*. In 1918 it was called *Via Mazzini* / *Via Garibaldi*; in 1938 *Via Giuseppe Mazzini* / *Via Giuseppe Garibaldi*, and since 1948 it has been called Rade Končara Street. Today it is called Flacius Street (Krizmanić, 2008a: 173-174).

6 The street has been called *Vicolo San Nicolo* since 1869 (Krizmanić, 2008a: 307).

7 One of the oldest streets in the historic center. Before 1948, the street was always called *Via Tradonico*, since its first official designation in 1869. Before 1869, it was called Calle (Contrada) Lombardo. (Krizmanić, 2008a: 323)

8 The toponym Old Market (*Mercato vecchio*) appears in the Middle Ages, precisely after the Old Market (*Stara tržnica*), one of four smaller squares created during the Middle Ages in the ancient forum area. (Krizmanić, 2008a: 300)

9 The toponym refers to an ancient, medieval street that no longer exists. In 1869 it was called *Calle della Bissa*, from 1869 to 1948 it was called *Vicollo della Bissa*, and after that it was nameless. A small part of the street towards Maksimijanova Street is still preserved. The street is named after its winding path, which was established in the Middle Ages based on the ancient layout. (Krizmanić, 2008a: 339)

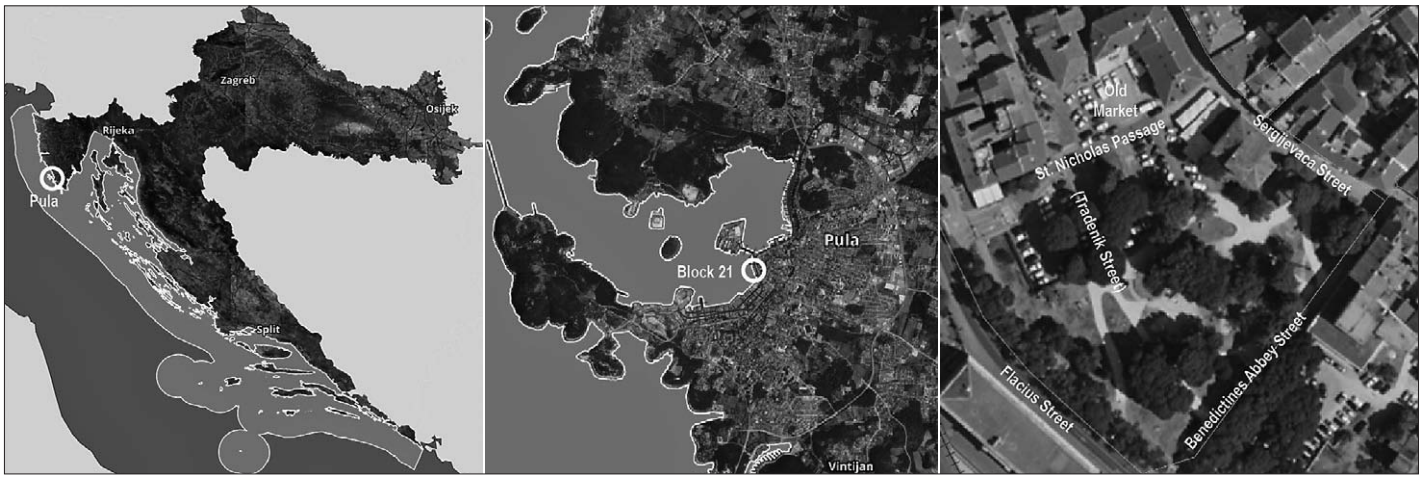


Fig. 2 Block 21 location

able qualities relevant to considering possible scenarios for the future development of the Block 21 area. In the final section, the article proposes considerations for the future presentation, integration, and conservation of this significant yet under-explored part of Pula's urban core.

Previous Research

The spatial and urban development of Pula has been examined extensively; however, Park Graz (Block 21) remains comparatively under-documented. Existing knowledge derives primarily from discrete, rescue-oriented

Table 1 List of previous archaeological research

Year	Location/Title	Source	Findings / Results
1875	Church of St. Nicholas	City of Pula, Administrative Department for Urban Planning, Investments and Strategic Projects, Urban Planning Section	Layout documentation
1953 1954	Church of St. Nicholas	Marušić, 1956.; Marušić, 1967.; Meder, 2003.; City of Pula, Administrative Department for Urban Planning, Investments and Strategic Projects, Urban Planning Section	small church with polygonal apse, massive building with square floor plan, well, cistern, ancient wall; "luxurious polychrome mosaic" (Meder, 2003: 64)
	Block 21 area 1st location	Mlakar, 1957.; Meder, 2003.; City of Pula, Administrative Department for Urban Planning, Investments and Strategic Projects, Urban Planning Section	ancient building remains, a round column fragment, foundations of an unusual ancient building, stone slabs, sidewalk
	Block 21 area 2nd location	Mlakar, 1957.; Grad Pula, City of Pula, Administrative Department for Urban Planning, Investments and Strategic Projects, Urban Planning Section	ancient building, mosaic surface (open atrium centre), monolithic stone slab with a circular opening in the middle; the largest mosaic surface in Pula (Meder, 2003: 54)
1972	Block 21 immediate vicinity	Archaeological Museum of Istria, 1972.	Roman sidewalk (Sergijevaca Street and Benedictines Abbey Street intersection); Ancient building remains – a wall (presumably the foundations of a Roman building, which stood on the edge of the forum of Roman Pula)
2010	Archaeological supervision of public lighting construction works	Archaeological Museum of Istria, 2010.	a piece of carved stone (made of two broken pieces) has been interpreted as a spolia taken from the ground
2012	Archaeological supervision during canal excavation	Archaeological Museum of Istria, 2012.	stone blocks (four collected); marble tiles fragments (one was profiled) towards St. Nicholas Passage
2016	Archaeological survey in the southeastern part of the block	Arheo TiM d.o.o., 2016.; Barada, 2017: 439-440.	walls and a furnace (17th-19th century), the eastern foundations of a building (second half of the 19th century) that formed the facade facing Flacius Street; steps and an ancient sidewalk

studies rather than from a coherent, site-specific research program.

The first recorded archaeological research took place in the second half of the 19th century when the Church of St. Nicholas was documented (architectural survey dated 1875; N.N., 1875). Archaeological excavations of buildings and spaces destroyed by a series of airstrikes at the end od World War II continued in 1953 and 1954 (the Church of St. Nicholas and two areas in Block 21 centre), again in 1972 (the immediate vicinity of Block 21), and finally several archaeological surveillances and evaluation trenches were undertaken in the 21st century. The basic data and results are presented chronologically in Table I.

Conservation research of the wider historic city core-area was carried out as a preparation for the spatial planning documentation for the City of Pula, the 1992 "Implementation Urbanistic Plan "Old Town Pula".[10] In 2016, amendments to the conservation study for the General Urbanistic Plan (GUP) of the City of Pula – within the scope of the Implementation Urbanistic Plan (PUP) "Old Town" – were prepared by Bruno Nefat of Modus d.o.o. (Modus d.o.o., 2016).

Research Methods and Sources

The spatial development research of Park Graz / Block 21[11] was based on: the analysis of historical maps, old photographs and postcards; the review of relatively scarce literature (mainly conservation and archaeological research) and fieldwork, including inventories and analysis of the current urban fabric.

The primary research aim was to determine the spatial and urban development of Block 21, with a particular focus on the evolution of the green landscape – today's Park Graz. To identify features relevant for proposing future development guidelines, the historical relationship between built and unbuilt (primarily green) areas was analysed in detail, along with their fundamental compositional characteristics. Comparisons between historically significant periods for park development were interpreted and graphically presented.

Research was conducted in several archives[12] and additional documentation was collected in relevant institutions.[13] Among the collected archival material, several key maps stand out. The earliest source with a detailed green areas representation, both at the city level and the area now known as Block 21, is the Franciscan Cadastre (1820). Particularly valuable for understanding the development of open (green) spaces are the cadastral plans from 1855 and 1866 (updated in 1872). A fundamental source for the park's design analysis is the 1953 plan, based on a conceptual proposal by Zdenko Kolacio[14] from 1951.

The Area of Block 21 from the Prehistoric Period to the Beginning of the 19th Century

The development of Block 21 area, and consequently the Park Graz formation, is inextricably connected with the development of the city. Therefore, this paper provides an overview of general citywide transformations characteristic of a specific historical period, while offering a more detailed presentation and interpretation of historical sources and archival materials directly related to Block 21 / Park Graz area.

- **Prehistoric period** – **Histria hillfort settlement** – A series of archaeological research and material remains verify a continuous settlement in the area and support the widely accepted hypothesis – confirmed by numerous scholars (G. Carrara, P. Kandler, A. Gnirs (Gnirs, 2009), K. Buršić Matijašić (Buršić-Matijašić, 2007)) – that a prehistoric hillfort settlement of the Histri once occupied the central hill of Pula (Fig. 3a). Among the natural features that significantly shaped the city's spatial organisation throughout its history, it is particularly noteworthy that potable water sources were located within Block 21.

- **Ancient city** – The Roman colony of Pula was founded during the time of Julius Caesar or shortly after his death, and no later than

10 „*Provedbeni urbanistički plan (PUP) „Stari grad Pula*""

11 The article is the result of research carried out for the Conservation Study (Faculty of Architecture, Department of Architectural Heritage, 2024).

12 Croatian State Archives, State Archives in Pazin and Split, State Archives in Trieste („*Archivio di Stato di Trieste*")

13 City Library and Reading Room of Pula, Historical and Maritime Museum of Istria, Archaeological Museum of Istria, City of Pula's Administrative Department for Urban Planning, Investments and Strategic Projects – Urban Planning Section.

14 Zdenko Kolacio (1912-1987) was a Croatian architect and urban planner. He founded the Urban Planning Institute in Rijeka (1952) and later led the Zagreb Urban Planning Institute (1956-1971). He authored numerous urban plans and was awarded the Vladimir Nazor Lifetime Achievement Award in 1983. (Franic, 2009)

15 The church was repurposed into a bakery in the 19th century and was ultimatelly demolished after World War II. In 1870, it was purchased by the Venetian Marinoni family, and later by the baker Cumer, who converted the building into a residence with a bakery and bread shop on the ground floor. Although the structure survived wartime bombing, it was demolished in the 1950s (Krizmanić, 2008: 307).

the accession of Augustus (Matijašić, 1980: 33). The Hercules Gates, the oldest part of the city walls, also dates from this period. A new city was built but, unlike most planned Roman cities based on an orthogonal grid characteristic of a Roman military camp (*castrum*), the urban matrix was significantly adapted to the prehistoric settlement spatial scheme, shaped by the terrain morphological characteristics (hills).

It is assumed that "the *cardo maximus* extended from the Fontik gate along the southern Forum side, across the todays St. Francis Ascent to the castrum at the top of the hill, and further along the small Roman theatre northern edge to the Hercules Gate" (Modus d.o.o., 2016: 41-42), thus placing the *cardo maximus* within the Block 21 boundaries.

The lower part of the city (*pars inferior*) was gradually filled with multi-apartment housing. Block 21, located near the city walls, was likely built up during this period (Fig. 3b). Its proximity to the Forum (in its original form) and the presence of a local drinking water source suggest that the built environment in this area may have been of higher status – "*luxury urban villas are also being built*" (Modus d.o.o., 2016: 41). This is further supported by archaeological finds, such as mosaic flooring within Block 21, and the famous mosaic „*The Punishment of Dirke*" discovered in the adjacent block. Such elite architecture was typically accompanied by correspondingly sophisticated landscape design. However, based on the available data, no conclusions can be drawn about the parcelling, let alone the actual landscape characteristics.

• **Late Ancient and Byzantine city** – The period from the late 4th century to the end of the 8th century did not bring radical changes to the urban matrix. At the beginning of this period, the city walls were reinforced in response to barbarian threats. The upper part of the city (*pars superiori*), previously characterized by luxurious villas, was restructured into an area with multi-residential insulas.

Following the spread of Christianity and the incorporation of Istria and Pula into the Eastern Roman (Byzantine) Empire in 538 (Marušić, 1967: 20), existing Roman sacral buildings were transformed and new Christian churches were constructed. These were mostly interpolated into the existing urban fabric without disrupting the existing street network (Fig. 3c). In the immediate vicinity of Block 21, Archbishop Maximilian of Ravenna built the monastery and church of St. Mary Formosa, a magnificent basilica with two cruciform side chapels, one of which is fully preserved today (Matijašić, 2005: 40). At the northern edge of Block 21 (St. Nicholas Passage and Sergijevaca Street intersection), the Church of St. Nicholas[15] was built. A typical Istrian church of the Ravenna type from the Justinian period, with a polygonal apse. Its west-east orientation introduced a new diagonal axis into the assumed radial block structure. No relevant information has been found regarding the landscape surrounding the church or any other part of Block 21 during this period.

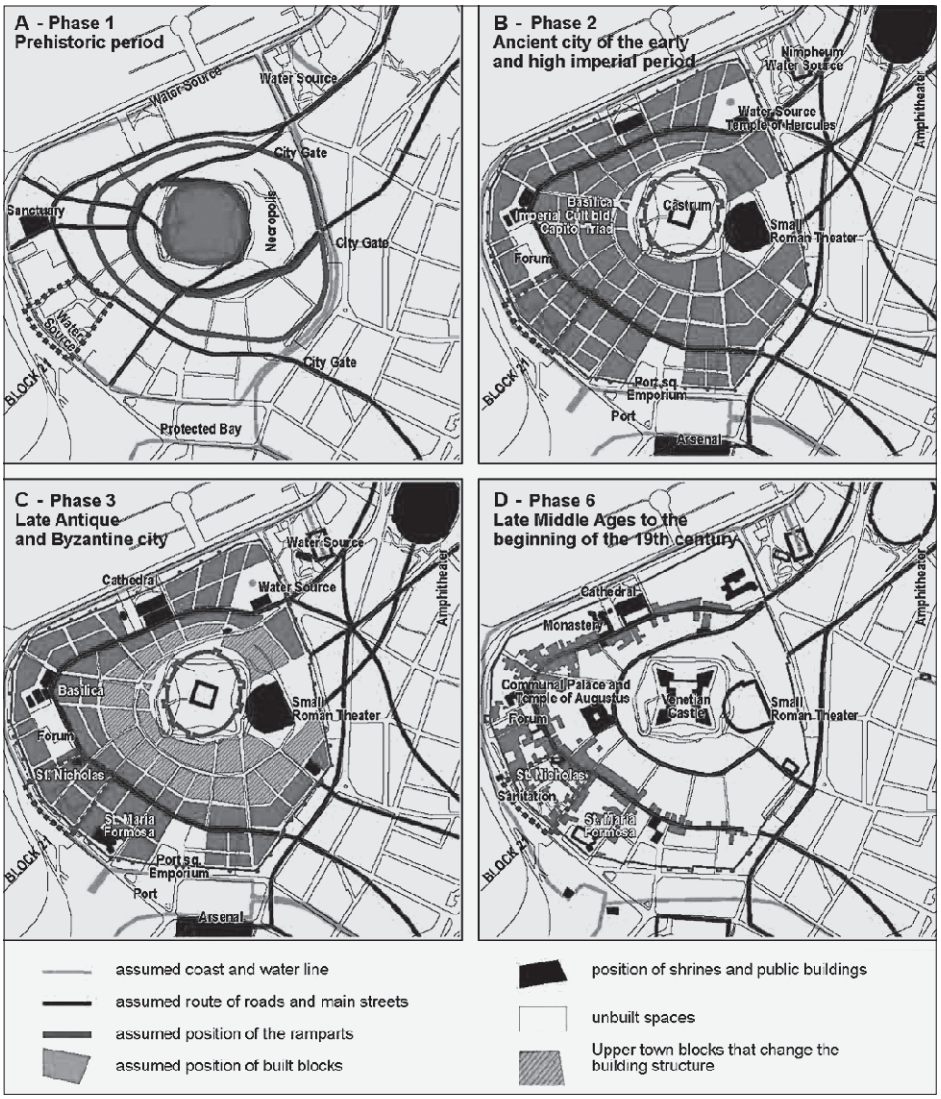


Fig. 3 Block 21 – Spatial development:
a) 1st phase – Prehistoric period;
b) 2nd phase – Ancient city of the early and high imperial period;
c) 3rd phase – Late Ancient and Byzantine city;
d) 6th phase – Late Middle Ages to the 19th century

• **Early Middle Ages** – The period begins with the Lombard conquest of Istria and Pula in 751, followed by Frankish rule in 788, marking the gradual evolution of ancient city into a medieval urban community. Political power shifted from municipal authorities to a provincial duke supported by the Church. The decline of municipal rights and rising taxes led to impoverishment of the city and the

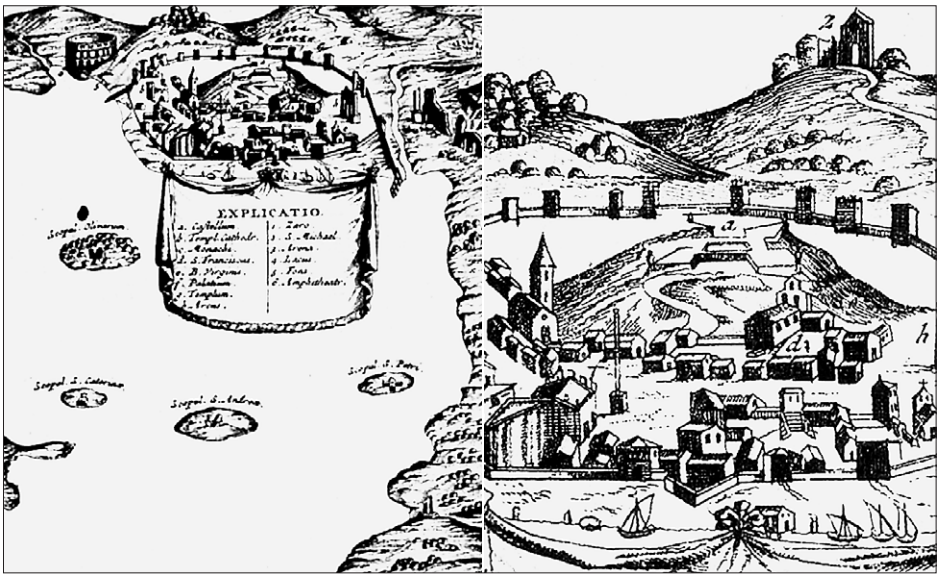


Fig. 4 View of Pula from the book by Antoine de Ville, Port and city of Pula (*Portus et urbis Polae antiquitatum, ut et thynnorum piscationis descriptio curiosa*), Venice, 1633

neglect of public spaces and infrastructure. Some of the late ancient lower quality residential insulas that arose in the upper part of the city (*pars superiori*) practically disappeared. Their materials, along with those from ancient public buildings, were reused as building material (*spolia*) in new, smaller-scale medieval buildings.

The city walls were rebuilt and strengthened during the 9th century. However, it remains unclear whether these changes had any direct impact on the spatial structure of today's Block 21. The transformation of the Roman Forum into smaller squares created the Old Market Square, which still exists today in the immediate vicinity of Block 21. A single-storey medieval market building, stood along the eastern side of the Old Market Square, but was demolished in 1974 for no apparent reason (Krizmanić, 2023: 337).

• **High Middle Ages** – Around 1145 Pula developed as a medieval commune. Despite political conflicts, resulting disputes and wars over the following centuries, architectural activity did not decline. During the Romanesque period (up to the late 13th century) the number of storeys in buildings increased (two and three-story houses), although their structural characteristics and typology changed only partially. During the Gothic period a medieval fortress was constructed on the site of the abandoned castrum. In the 14th century Pula developed into a prosperous medieval city with active trade and infrastructure. Its further growth was suddenly stopped by repeated plague outbreaks. At the height of its medieval power, Pula had between 5000 and 6000 inhabitants within city walls (Modus d.o.o., 2016: 47).

• **Late Middle Ages to the beginning of the 19th century** – This period is characterised by a series of Renaissance reconstructions – such as the cathedral, and the communal palace, as well as the construction of urban palaces (e.g. building 14 on the Forum, building 23 in Block 12), of which only fragments have been preserved. Despite these developments, Pula continued to suffer from the effects of depopulation.

Records from contemporaries (Fig. 4) indicate that the city fabric was significantly reduced, almost the entire *pars superiori* had disappeared and parts of the lower town were sparsely built.

Within Block 21, the Church of St. Nicholas remained visible, along with a row of houses lining the northeastern edge of the block. In contrast, the opposite side of Sergijevaca Street appeared undeveloped. This illustration does not entirely align with the city scheme presented in the 2016 Conservation Study (Fig. 3d), which shows a continuous row of houses along the north-eastern side of Sergijevaca Street. In any case, Pula was inexorably declining until the beginning of the 19th century.

The Block 21 Area on Cadastral Maps from 1820 to 1943

• **The Austrian governance period 1815-1918** – After the fall of the Republic of Venice in 1797, Pula briefly came under Habsburg control, then under Napoleonic France, and was finally reintegrated into the Habsburg Monarchy after the Vienna Congress in 1815. Upon re-establishing authority, the Habsburg administration abolished the old municipal statutes and initiated the preparation of a cadastral plan.

The first cadastral plan, dating from 1820[16] (Fig. 5) shows historical Pula urban structure before the extensive modernization that followed. At the time, the city had only 926 inhabitants, with approximately 200 buildings preserved (Krizmanić, 2005: 121). The built fabric was concentrated along the main concentric streets – Sergijevaca Street, the Forum, and Kandler Street – as well as in the southwest part of the city, where Block 21 is located. By contrast, the upper part of the city remained predominantly undeveloped. Although largely damaged, the medieval city

16 Franciscan cadastre – Original cadastral plan in 24 sheets kept in the State Archives in Split.

17 It was "demolished after 1947" (Krizmanić, 2005: 127).

18 They were "demolished after 1950" (Krizmanić, 2005: 128).

walls still define the façade facing the sea (Krizmanić, 2008b). Despite the relatively small scale of the cadastral map, green areas are numbered and their internal structure is visible. Also, surprising is the absence or poor articulation of green spaces adjacent to some of the most important buildings – the Porta Aurea (Golden Gate) from the Roman era (Fig. 5/3) as well as the cathedral renovated in the Renaissance (Fig. 5/1). In contrast, in the Block 21 area, seven larger articulated green areas (24-30) are visible with four indicated wells.

Block 21 (Fig. 9a) is defined by three streets and a coastline, and its area is divided with an additional internal street in a northwest-southeast direction (later Tradenik Street). The Church of St. Nicholas is located at its northwest corner. Within the block 42, buildings are recorded.

The block was not entirely enclosed:

– the northeastern corner remains, unbuilt featuring an articulated green space (possibly a park);

– the unbuilt part west from the church, along St. Nicholas Passage, appears as a plain green surface, unlike adjacent area that is diagonally articulated (probably a church garden);

– the southwestern section is partially built and separated from today's Flacius Street by a wall, behind which a structured green space was formed.

Most green areas are characterized by a symmetrical – axial layout, except the one adjacent to the church that is aligned to its diagonal direction. Within some areas, symbolic representations of trees are clearly visible. Due to the scale of the map, they should be interpreted as symbols, though they still indicate the presence of trees within the block at that time. Three wells are located close to the buildings, while the fourth lies at the intersection of central pathways within a green space composed of eight roughly equal rectangular fields.

The 1855 cadastral plan (Fig. 6) still does not display substantial structural changes at the city level compared to 1820. However, new landscape (green) areas emerged in all parts of the city, often exhibiting significantly more complex compositions. Particularly notable are:

– the northern coastal green areas, where orthogonal compositions (some with emphasized circular or star-shaped intersections), as well as diagonal and radial patterns (in the far northeast) are visible;

– a Baroque-style landscape composition with an elliptical central field east of the Forum (Fig. 6/2);

– a fragmented distribution with a circular central path located behind the blocks along Sergijevaca Street, northeast of the present-day Block 21.

The consolidation of sea front (Fig. 9b), and a new building[17] on the corner of Sergijevaca Street and Benedictines Abbey Street are visible. Before 1855 nine buildings were built along the coastline, five of which are located within Block 21.[18] The total number of buildings in the block increased to 59. Despite the larger plan scale, the landscape is shown in considerably less detail. Nevertheless, it is apparent that the articulated green structures within the block were simplified compared to the 1820 cadastre: the diagonally structured garden adjacent to the Church of St. Nicholas and the central well at the path intersection have disappeared.

From the landscape design perspective, the next cadastral plan from 1872 (Fig. 7) is particularly interesting, as it again, at the city level, shows a significant progress of landscape complexity. In addition to the axial and radial compositions observed so far, several more freely composed areas stand out. North of the cathedral (Fig. 7/1), an axially symmetrical park was formed, but the planting is relatively freely arranged. The largest and most complex landscape composition was formed on the former city gardens (Giardini) site along the city walls eastern edge (Fig. 7/3).

More complex landscape compositions also appear within Block 21 (Fig. 9c). The open (green) area, which probably belongs to the house at St. Nicholas Passage 3, shows a greater degree of complexity and articulation: a relatively simple orthogonal path system is enriched with five roundels. In the western part of the block, a relatively small rectangular green area is articulated by four semi-roundels. The adjacent block to the north, across St. Nicholas Passage (on the Old Market site), also has a clearly defined symmetrical landscape composition.

It should ne noted that, for the first time, a clear distinction between the coastline and the street along the southern facade of the block is documented, as well as rectilinear shoreline correction / land reclamation preceding the shipyard construction.

Cadastral plan from 1866 / 1878 (Fig. 8) shows a new representative city facade facing the sea (Krizmanić, 2005: 190) and articulated Flacius Street (*Via dell Arsenale*). The previously standing medieval city walls had been

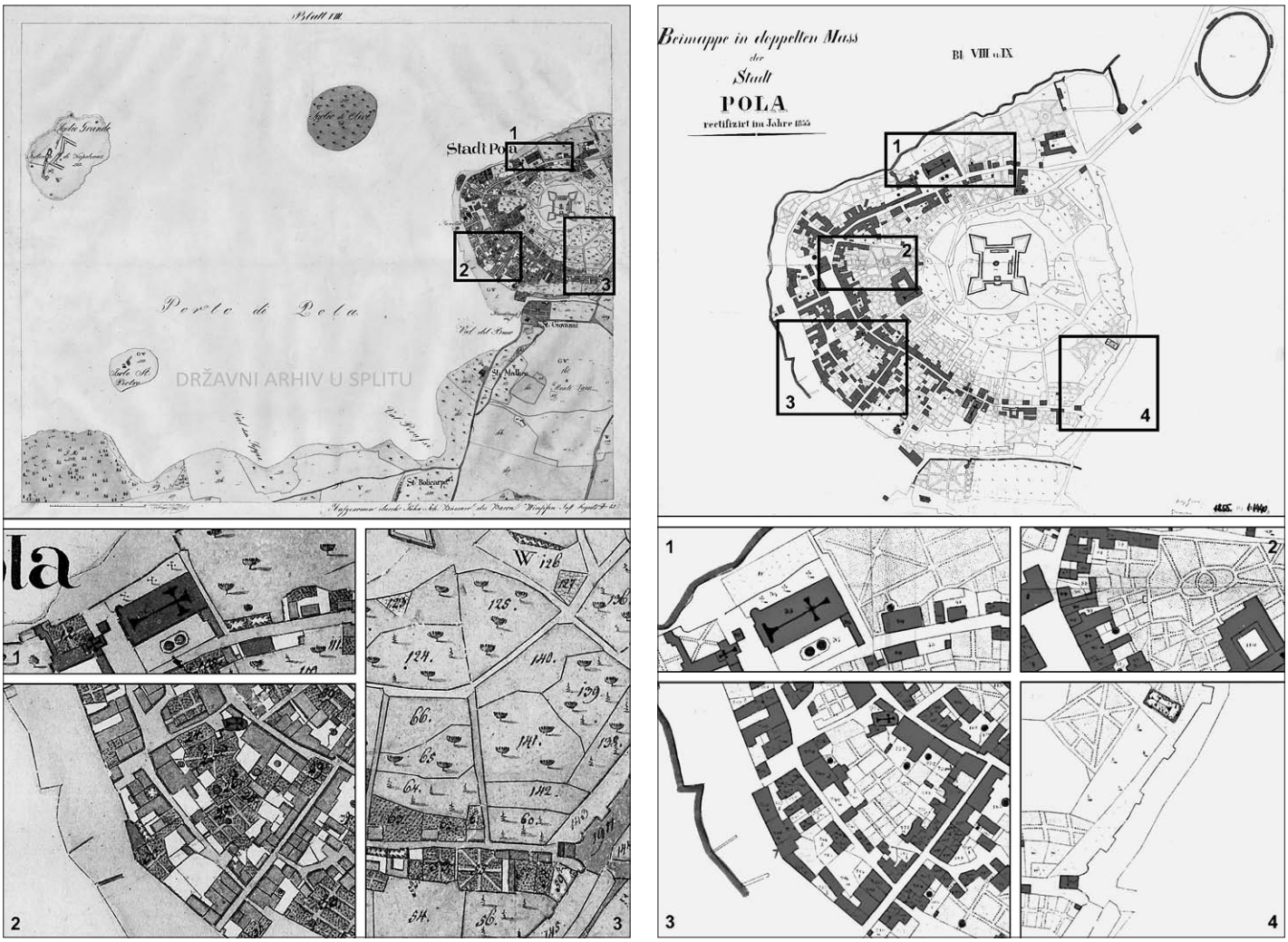


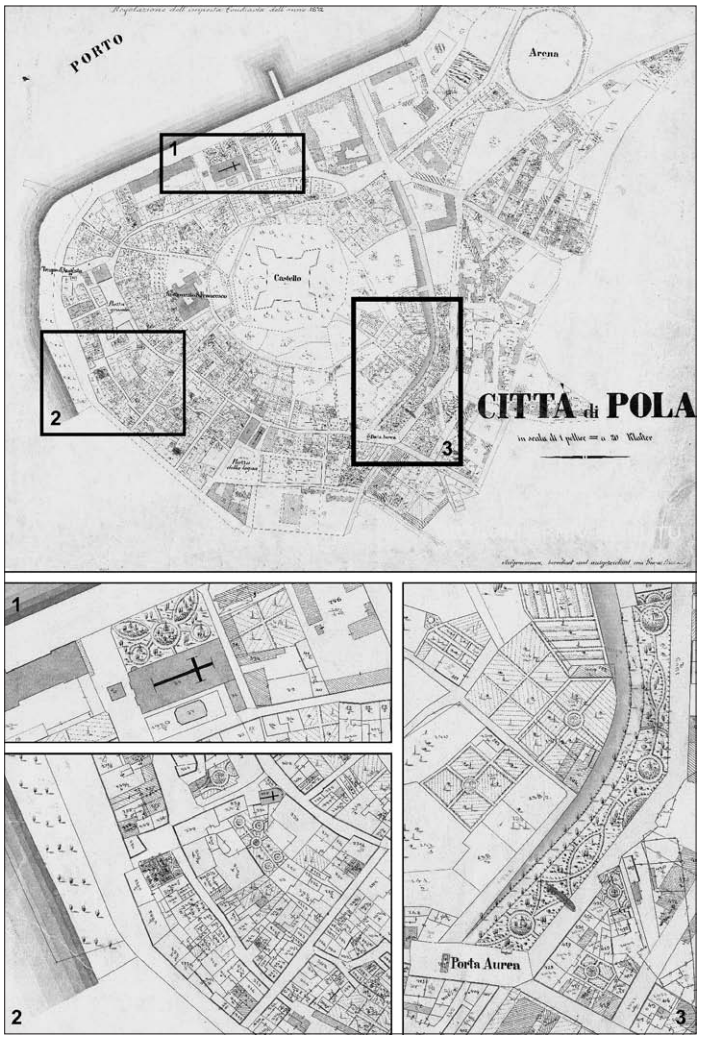
Fig. 5 Original cadastral plan from 1820 in 24 sheets. Enlarged details: 1) Cathedral, 2) Block 21, 3) *Porta Aurea*

Fig. 6 Cadastral plan from 1855 at a scale of 1:1440. Enlarged details: 1) Cathedral, 2) Baroque-style layout east from the Forum, 3) Block 21, 4) *Porta Aurea*

almost entirely replaced by large buildings that now formed a more substantial physical and visual barrier between the waterfront and the fragmented architecture of adjacent blocks – arguably more so than the medieval walls they replaced (Krizmanić, 2005: 130). This trend of edge consolidation is also evident in (two-part) Block 21. However, due to reduced graphic detail (Fig. 8/2), it is not possible to analyse possible open space transformations. In the areas in front of the cathedral (Fig. 8/1) and along Porta Aurea / Giardini (Fig. 8/3) significant layout simplifications are evident compared to 1872 cadastral plan.

The city has significantly expanded beyond the former walls' boundaries, primarily satisfying the increased needs of the Habsburg Monarchy's main military port. Along with the large development planned to the south and the arsenal construction it is, to a lesser extent, accompanied by the residential area growth along the existing traffic routes to the east and north. Consequently, Block 21 lost its original coastal position – previously situated just behind the defensive wall – and became partially separated from the sea by newly constructed military structures associated with the arsenal. During the second phase of city expansion (up to approximately 1900), rapid urban growth was accompanied by the gradual infill of emptied plots within the historical core.

A new 1898 cadastral plan, in a relatively large scale (1:1250), shows Block 21 in detail at the turn of the century (Fig. 9d). The sea façade is now entirely built up, as is the northwestern edge towards St. Nicholas Passage. The remaining block edges are predominantly closed, with occasional street niches in Tradenik Street, Benedictine Abbey Street and St. Nicholas Passage. Smaller-scale structures dominate the interior of the block, which now contains over 70 buildings, indicating a near total build-up.



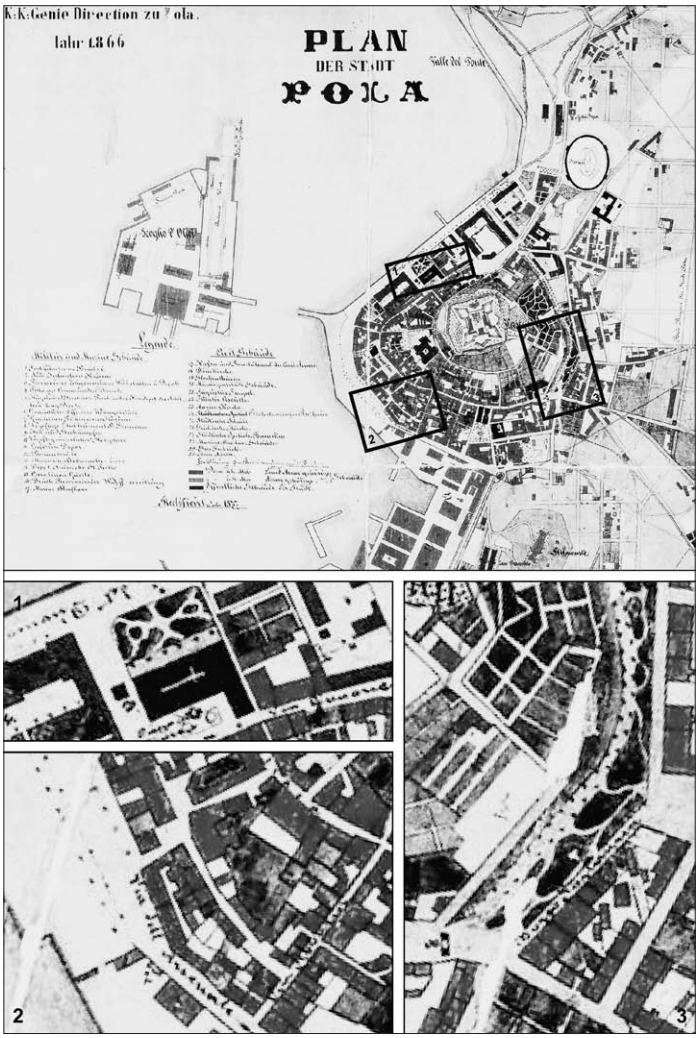


Fig. 7 Cadastral plan from 1872. Enlarged details: 1) Cathedral, 2) Block 21, 3) *Porta Aurea* / Giardini

Fig. 8 Cadastral plan from 1866 / updated 1878. Enlarged details: 1) Cathedral, 2) Block 21, 3) *Porta Aurea* / Giardini

Of particular interest is the four-part park area with a promenade and three internal transverse paths – likely belonging to the building at St. Nicholas Passage 3. Compared to the 1872 layout, this green space appears to have a significantly simplified composition.

Most of the open spaces visible in the earlier plans have been built in the meantime, and the remaining open space has been reduced to the necessary minimum courtyard space without any visible landscape composition. Wells, previously marked, are no longer visible on the plan. This intense densification covered nearly the entire area of the Roman *insula*, likely resulting in damage to any subsurface archaeological layers. Nevertheless, archaeological surveys have uncovered noteworthy remains.

• **The Italian governance period 1918-1943** – After the fall of the Austro-Hungarian Empire in 1918 and until Italy's capitulation in World War II, Pula was governed by Italian authorities. With the loss of its role as the monarchy's main war port, the city experienced another depopulation, which resulted in relatively minor interventions in the existing urban fabric.

In 1935, the City of Pula decided to develop a regulatory plan and hired the architect Luigi Lenzi, one of the *Gruppo degli urbanisti romani* (G.U.R.) founders (Jurcan, 2020: 148). The plan addressed three fundamental objectives across multiple levels: the creation of a decentralized "urban aggregate" for the wider Pula area, zoning of both the city and the port, and the "hygienic rehabilitation" of the historic city core (Jurcan, 2020: 149).

In the Block 21 area, Lenzi's regulatory plan proposed the partial demolition of buildings and expansion of Tradenik Street and St. Nicholas Passage to establish more monumental approaches toward the Forum in the west, i.e. St. Francis church and monastery in the north.

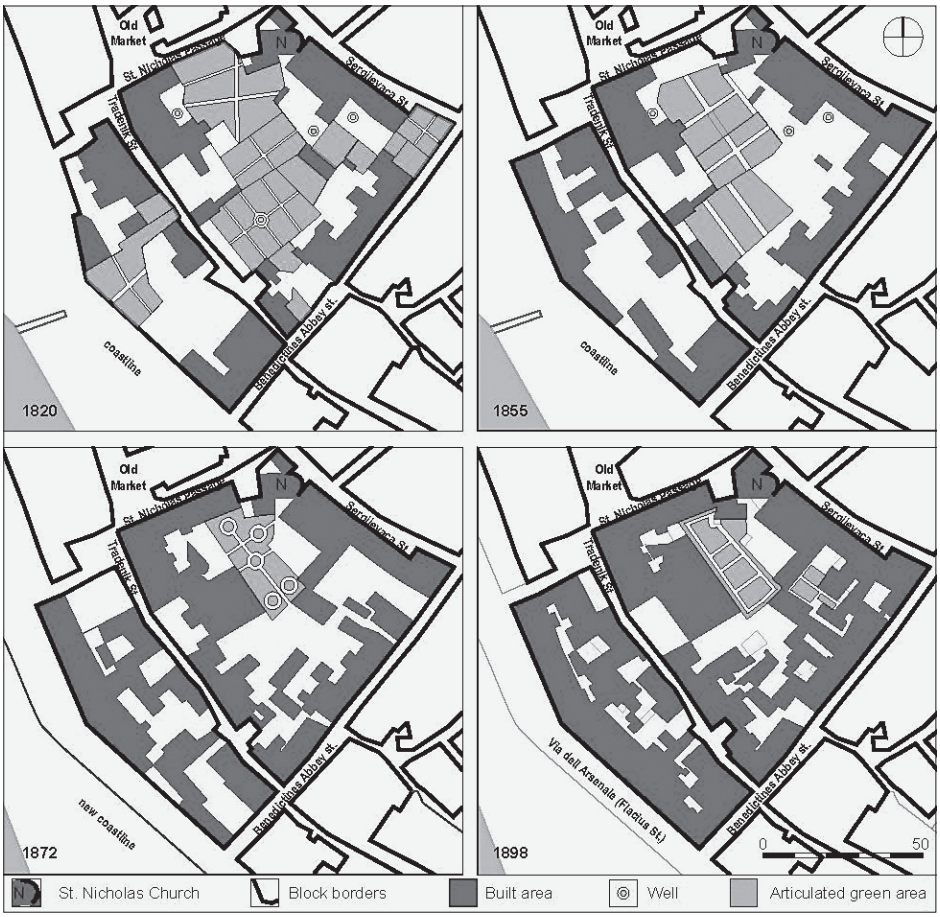


FIG. 9 BLOCK 21 – BUILT AND GREEN AREAS DEVELOPMENT: A) 1820, B) 1855, C) 1872, D) 1898

FIG. 10 BLOCKS 21 AND 22 AFTER DEMOLITION IN 1953

FORMATION AND DEVELOPMENT OF THE CITY OF GRAZ PARK IN BLOCK 21

• **World War II, bombing and initial post-war reconstruction 1943-1947** – Following the armistice signing in September 1943, German forces took over command of the city. Between January 1944 and May 1945, the city suffered heavy destruction in 23 air raids carried out by Allied forces (Marsetič, 2005: 289). Despite the low resolution, aerial photographs taken during the bombing (Fig. 11) clearly show the historic urban structure and the final state of Block 21 prior to its destruction.

Before the bombing Pula had 3225 residential buildings, 235 of which were completely demolished and 2,170 sustained varying degrees of damage (Marsetič, 2004b: 161) causing Pula's historic core to lose an important part of its heritage. Within Block 21 alone, at least 38 buildings were damaged (Marsetič, 2004a: 171-195). A large number of damaged residential buildings were removed after the war, consistent with Lenzio's pre-war regulatory plan, which aimed at "healing" the historic centre.[19] All the remaining buildings were demolished in 1952 (Marsetič, 2005: 305). The bombings radically changed the (until 1944) compact urban fabric of Pula (Ancelj, 2013: 250) and were disastrous for the western and southwestern coastal areas of the city (Fig. 12). Block 21 underwent an especially radical transformation, as a once densely built part of the city was reduced to an entirely open, unbuilt space (Fig. 10).

After the war, Pula came under the Allied Military Government, which initiated the infrastructure and public buildings reconstruction through the public works authority (*Genio Civile*), while also co-financing up to 50% of the private building reconstruction (Marsetič, 2004b: 161). By the time Pula came under the administration of Yugoslavia in 1947, most of the infrastructure and building reconstruction had been completed, and the Department for Monument Protection (*Soprintendenza ai monumenti*) undertook significant efforts to restore cultural heritage sites (Marsetič, 2005: 306).

19 Lenzio's plan was based on the tradition of the Italian school of modern conservation and the theoretical assumptions defined by the architect, conservator and conservation theorist Gustavo Giovannoni (1873-1947), whose postulates also found their place in the conclusions of the first international conservation document, the Athens Charter on the restoration of historical monuments (1931). In terms of urbanistic planning, his work "Urbanistic thinning of old centers" is particularly important (*Il 'diradamento' edilizio dei vecchi centri. Il quartiere della rinascenza a Roma*, 1913).

20 Idejna skica za regulaciju predjela od Fora do ulice Minerva u Puli – Tehnicki opis (HR-DAPA-114, GNO – PULA, 1949.-1955.)

21 "Composed hastily, without prior studies and plans, on the wrong line of planning started at the end of the 19th century." (Krizmanić, 1986: 9)

• **City of the second half of the 20th century** – The relatively successful post-war reconstruction and political integration into Yugoslavia were accompanied by a real exodus of the Italian population. By 1948, the city's population had declined to 21,065 – approximately 40% of its pre-war size. After the situation stabilized, the population grew again, creating new demands for housing and infrastructure. These needs were met to a lesser extent by the existing building stock reconstruction and to a much greater extent by new construction and interpolations.

In the second half of the 20th century, efforts were made to improve the preservation of historical values, and to guide urban development through a variety of planning and design interventions. Selected activities of particular importance are listed in Table II. Key developments related to Block 21, especially those concerning its landscape character, are briefly outlined.

In 1947, new urban regulations formally recognised the Block 21 area as "a protected part of the city of historical and artistic importance" (Article 1). Also, the Church of St. Nicholas was listed as one of the buildings "which have, either in their entirety or in their details, characteristic features worthy of preservation" (Article 2). All ruin remains were placed under protection and "any construction work on any building (even damaged and abandoned) without prior permission from the Conservation Institute in Rijeka" (Article 4) was forbidden. The Regulation envisaged comprehensive valorisation of architectural heritage and active reconstruction of the historic core – including ruin sites – but this has not been realized (Krizmanić, 1986: 9).

Following the 1951 directive[21], which focused exclusively on structures from Antiquity and the Middle Ages, extensive clearing of post-medieval ruins began. Unfortunately, the works were not accompanied by adequate archaeological research that would enable a better understanding of the urban development of the city and a more objective valorisation of Pula's architectural heritage.

All the parks in Pula created after 1947 (e.g. Park Graz, Tito's Park, King Petar Krešimir IV Park) occupied "newly created" free spaces within the densely built-up historical core. Most of the projects were designed by the Urban Planning Institute in Rijeka, according to the proposals of architects Zdenko Sila and Zdenko Kolacio and surveyor V. Karlić (Matošević, 2004: 172). "Guided by the idea of creating a 'green city', often neither in form nor in the choice of plants, the new solutions are not adapted to the spatial ambience of the Mediterranean climate" (Matošević, 2004: 172).

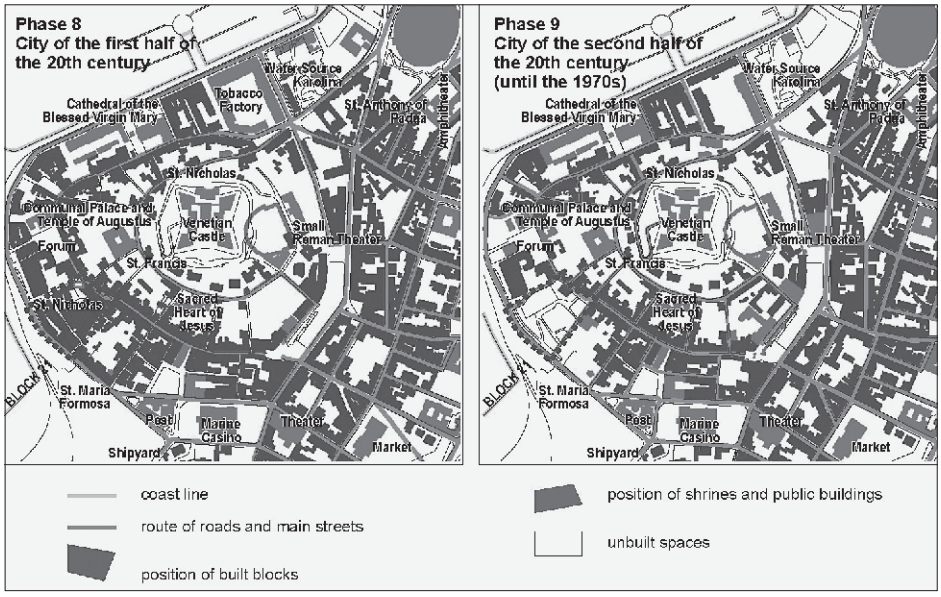


Table II Documentation list

1947	Regulations for Preservation of Antiquities in the City of Pula (City of Pula, Conservation Institute Rijeka)
1951	Remarks and proposals for the system of the Urbanistic Plan for the construction and development of the City of Pula (Archaeological Museum of Istria)
1951	Regulation Conceptual sketch of the area from Fora to Minerva Street in Pula – Technical description[20], Zdenko Kolacio (State Archive in Pazin)
1953	Development plan of area from Republic Square to Fishing Street / According to conceptual project by Zdenko Kolacio / Drawn by Vladimir Kartic (State Archive in Pazin)
1960	Proposal for the establishment of an Archaeological Park in Block 22
1966	General Urbanistic Plan – City of Pula
1983	General Urbanistic Plan – City of Pula
1992	Implementation Urbanistic Plan "Old Town of Pula"

Fig. 11 Allied bombing of Pula in 1944. Enlarged detail with indication of Block 21.

Fig. 12 Block 21 – Spatial development: a) 8th phase – City of the first half of the 20th century; b) 9th phase – City of the second half of the 20th century

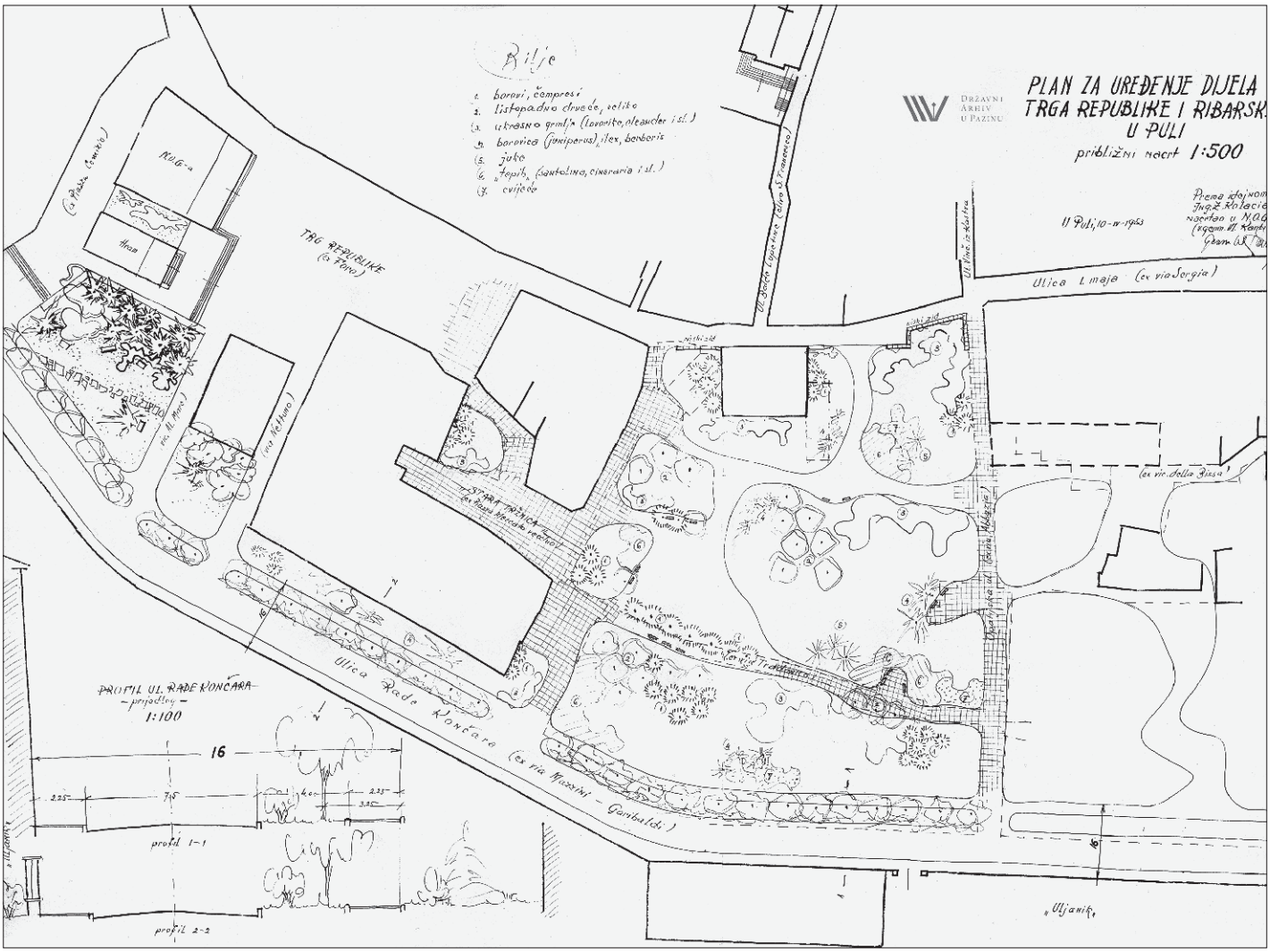


FIG. 13 DEVELOPMENT PLAN OF AREA FROM REPUBLIC SQUARE TO FISHING STREET / ACCORDING TO CONCEPTUAL PROJECT BY ZDENKO KOLACIO / DRAWN BY VLADIMIR KARTIĆ, 1953

In 1951, Zdenko Kolacio made the Regulation conceptual sketch – Fora to Minerva Street area in Pula. He was dealing with the problem of urban interpretation of the ruined part of the city and mostly refers to the Block 21 area. Kolacio sees this area as a park "revived by three smaller pavilions that will give the desired attractiveness that this public area needs due to its eccentric position in relation to the busiest areas of the city today". Kolacio argues this idea with the need to create a green area due to the lack of such spaces nearby, on the one hand, and on the other hand, sees this area as compensation for the lack of contact with the sea due to the industry proximity. The same author also emphasizes the need for additional articulation of the St. Nicholas Passage (cardo maximus) and its relationship to the Old Market, as well as the articulation of Sergijevaca Street (*decumanus*) and its connection with the Forum, to a lesser extent by new construction, and to a significantly greater extent by the creation of the new (green) park area. He predicted all of this in what was historically one of the most built-up areas of the city! It can be said that the idea was largely implemented with the realization of the Park Graz.

The proposed new corner block (at the intersection of Benedictines Abbey Street and Sergijevaca Street), the pavilion in St. Nicholas Passage, as well as the three smaller pavilions within the park, were not built.

The landscape (realized) part of the proposal is shown in the 1953 Urban Development Plan (Fig. 13). In this Plan landscape design was used as a means of spatial articulation beyond Block 21, all the way to the area west of the Augustus Temple. As a result, the once

22 As was discovered, that bakery was actually the profaned St. Nicholas church (Regan, Nadilo, 2010: 342).

densely and continuously built street area, bordered on one side by the construction of Uljanik (closed-type use), and on the other side by buildings with highly urban, open-to-the-citizen facilities, became (and remains) a road between Uljanik and the park, which can be clearly seen in the comparative photograph of the same area before the bombing and today (Fig. 14).

The proposed park concept is characterized by a free path composition, mostly organically designed while maintaining the basic direction, approximate form and position of the historic Tradenik Street. The path (Tradenik Street) direction is emphasised by two tree lines which are, along with the one beside Flacius Street, the only formal tree arrangements within the park. The intention was meant to separate the historically existing pathway from the new (approximately parallel) one. These two pathways articulate the space into three zones of similar dimensions. A larger (probably gravel) plateau (children's playground?) was formed in the central zone. Freely arranged plant groups are placed throughout the park.

Based on Kolacio's project, the remains of the buildings bombed in WWII were demolished in 1953 and 1954. In Block 21, only one house remained, while about sixty others were removed (Ancelj, 2013: 29). Archaeological excavations followed in Block 21 central area and the Church of St. Nicholas.[22]

• **Urbanistic and spatial plans of the second half of the 20th century** – The first two General Urbanistic Plans of the City of Pula (1966 and 1983) did not consider preservation and development guidelines for Block 21 in detail. However, the tendency of "filling the missing blocks with green areas (it is difficult to talk about meaningful park design)" (Modus d.o.o., 2016) most certainly refers to Block 21 area. In the late 1980s and early 1990s, despite the process of gaining independence and the duration of the Homeland War, a series of significant residential and commercial building interpolations occurred along Kandler Street and Sergijevaca Street. The Block 21 area was systematically elaborated by the 1992 Implementation Urbanistic Plan "Old Town Pula". Along with richly elaborated analytical maps, the plan provided a series of guidelines for a comprehensive system of the city's core preservation and reconstruction.

As a preparation for the plan, a proposal for the interpretation of possible construction in Block 21 was made by architect Goran Detelić (Fig. 15) in 1991. He envisaged a semi-open block construction with significant closures along all roads, reduced depth (approximately to the historic inner Tradenik Street), a park inside the block and a wider green zone towards Flacius Street.

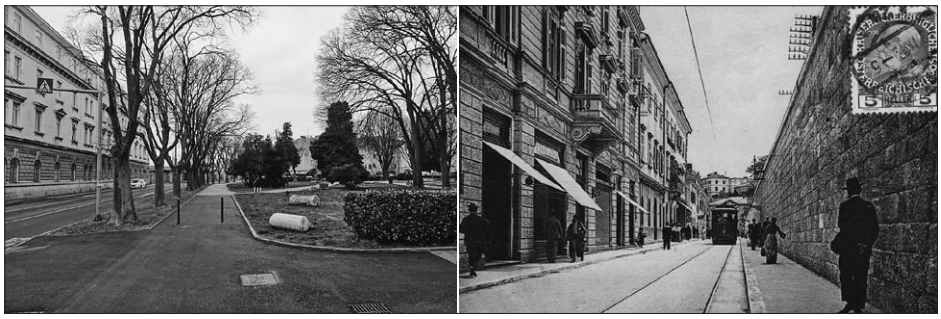


Fig. 14 Block 21 – Flacius Street: a) Panorama in 2024, b) Before the bombing (opposite view)

Critically, it can be said that this interpretation respects the historical two-part block nature. The southwestern part of the block is envisaged as a predominantly park area, built only along the former Tradenik Street (in accordance with Kolacio's idea of compensating for the lack of contact with the sea) and the northeastern, larger part of the block, as a semi-open block with a park in the center. Buildings height, as well as the significant parcelling fragmentation, differ from the buildings format from the period before the bombing. In 2006, the Pula City Council unanimously adopted amendments to the Implementation Urbanistic Plan (PUP) which prohibited construction on green areas within the historic core (Ujčić, 2021: 54).

• **The city at the end of the 20th century and the beginning of the 21st century** – The beginning of the 21st century was marked by new interpolations into the city's fabric, sig-

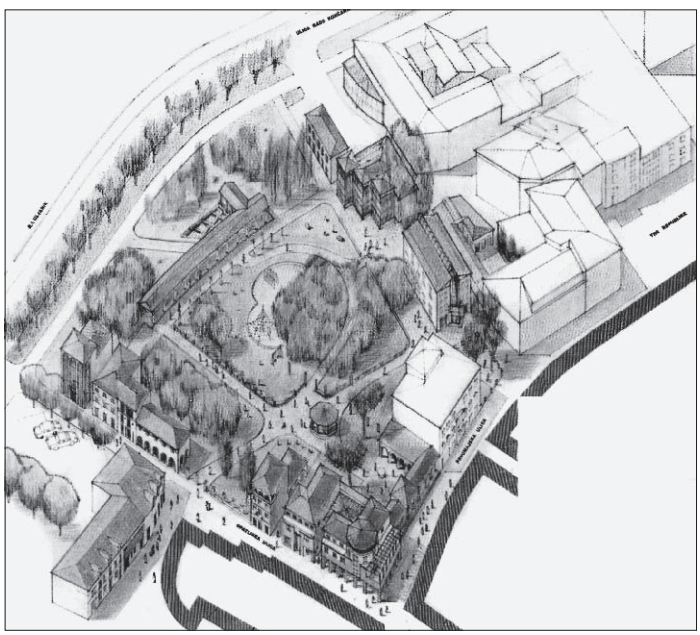


Fig. 15 Interpretation of possible new construction in the Graz City Park by Goran Detelić, 1991

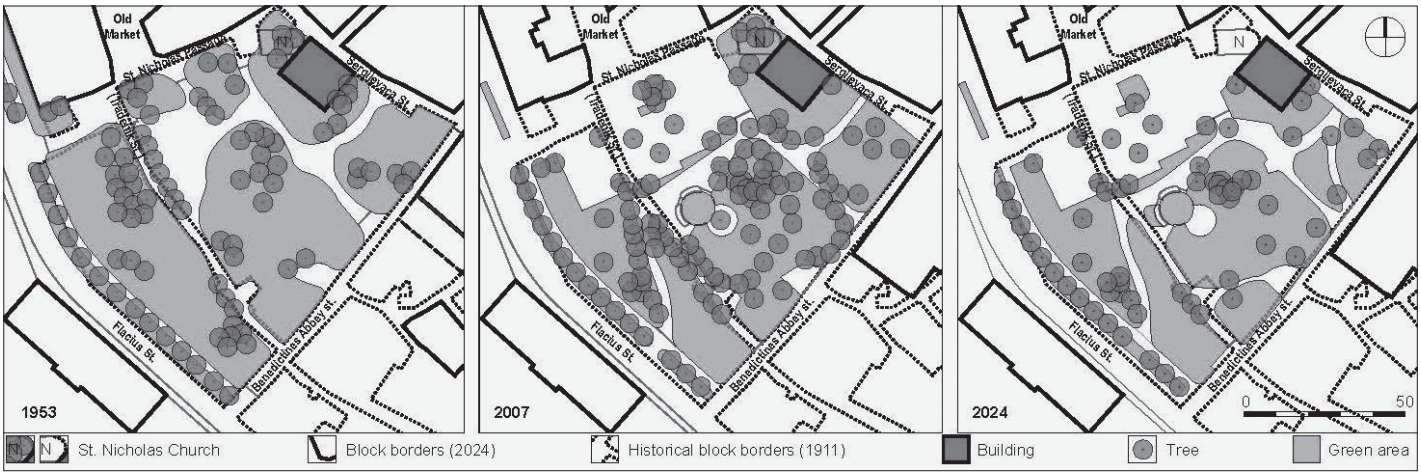


FIG. 16 GRAZ CITY PARK LAYOUT SCHEME: A) 1953, B) 2007, C) 2024

nificant public buildings (e.g. Museum of Contemporary Art of Istria, City Library), paving reconstruction and archaeological research of the Forum (with significant new Ancient and Middle Age findings), and the Riva and Flacius Street reconstruction. As for Block 21, it can be stated that no changes were registered in the reconstruction, nor in maintaining Park Graz.

In 2016 (Modus d.o.o.), the architectural heritage was evaluated and identification sheets of blocks and individual buildings were created, representing a significant foundation for a new approach to protection and interpretation of architectural heritage systematically, also reviewing the current state and previous approaches. Block 21 (and the only remaining building) is evaluated as category A1[23] „due to its exceptional position in the city's urban matrix and potentially important archaeological findings". For the entire Block 21 area additional archaeological research was prescribed and only necessary maintenance works were allowed (parking and partially green areas).

THE CITY OF GRAZ PARK TODAY

The current park layout originates from Kolacio's original idea from 1953 but has been repeatedly modified over the past 70 years. In this chapter the existing state is described in detail and compared with the 2007 situation and the original 1953 idea.

Today, Block 21 (Fig. 16c) is divided into two clearly defined parts – Park Graz (two-thirds) and a parking area (one-third). The only preserved building is located at the northeastern edge. Park composition is poorly legible and just a few somewhat articulated elements stand out: the double circular motif and children's playground, a tree line along Flacius Street, the tree line remains (three trees) along the main pathway (Tradenik Street) and a larger tree group in the central zone. Pathway system has changed over time, and today, no logical hierarchy can be recognized in relation to their spatial significance. Historical Tradenik Street is roughly visible only as a pedestrian connection through the park (Fig. 17).

FIG. 17 VIEW OF TRADENIK STREET: A) HISTORICAL POSTCARD B) 2024

Archaeological stone fragment groups of different origins (mostly from the Roman period), varying levels of completeness and preservation are presented on the lawn at 17 micro-locations. This exhibition is probably a result of the 1960s idea to establish an Archaeological Park in Block 22. Besides already mentioned green elements, freely arranged smaller groups, solitary trees and

23 According to Modus (2016): Evaluation category – D.2. Outstanding monumental value of wider regional and national significance (A1): Buildings or building complexes of outstanding monumental value of wider regional and national significance, which must be absolutely preserved and restored using scientific methods and conservation principles, and where only demolition of inadequate contemporary additions is permitted.

hedges can be found throughout the park. A quite rich vegetation includes: eleven tree species (*Celtis australis* L., *Quercus ilex* L., and *Cupressus sempervirens* L. are most frequent), 61 trees (85% mature and old trees) and a large number of shrubs (Fakultet šumarstva i drvne tehnologije, 2024). The qualitative and quantitative analysis showed a surprisingly high proportion of very high-quality trees (47.6%) and a relatively small proportion of trees that need to be removed (16.4%) (Fakultet šumarstva i drvne tehnologije, 2024). The reason for such good quality vegetation could be the relatively protected park position (damage caused by salinity is not visible), on the one hand, and on the other, the existence of underground water. Four wells were historically documented in this area and even though there are no visible traces of their existence, groundwater appears at relatively shallow depths (it was generally assumed to be of marine origin, but presented research results, cast doubt on this claim).

In the existing park composition, significant deviations in relation to the original 1953 (Fig. 16a) are evident, and some are already visible in 2007 (Fig. 16b):

– a green area reduction (a parking area with solitary and tree groups in the northwest part);

– two new circular motifs in the central zone (partially within a larger triangular surface);

– a new path diagonal to Tradenik Street connecting the parking and Flacius Street (diminished its symbolic connection with the historical matrix).

Additional changes after 2007 include:

– considerable degeneration of pathway system (in terms of their exact articulation and their number);

– further fragmentation of green area (new pathways)

The planting concept is unrecognizable since it has been modified substantially since 1953:

– new tree lines (2007) along three pathways including a double one along former Tradenik Street as an attempt to further emphasize its historical significance (was not successful and only three trees remained in 2024);

– nearly linear tree formation in the central green area, perpendicular to Tradenik Street (2007) does not exist today;

– general severe reduction of solitary and tree groups.

Fig. 18 Composite map

It can be assumed that some of the trees have been damaged in the meantime by "frequent windbreaks" that "are the result of poorly constructed subsoil and the wrong choice of plant species" (Matošević, 2004: 172). The current state of the park does not reflect the importance that this space could, and arguably should, have within the protected historic core of the city. In its present form, the park lacks a coherent composition and does not embody significant artistic value. Nevertheless, its ecological role within the relatively dense urban fabric is not negligible.

Discussion

The composite map (Fig. 18) overlaying key details from different historical periods can provide a foundation for considering the future planning of Block 21.

The archaeological findings layer (covering a negligible part of the block area) clearly reveals a recurring presence of material remains of various periods and significance and along previously investigated lines. When overlayed with the maximum construc-

tion area, it becomes evident that Roman era remains are found even in areas that remained unbuilt until the 19th century. Also, it should be noted that the most significant discovery (Table I, 1953/1954) was made precisely at a site recorded as developed in 1872 and 1898 cadastral plans.

The nature of these significant finds (e.g. mosaics), along with discoveries in the adjacent Block 22 (e.g. „*The Punishment of Dirke*"), contradicts the generally accepted view that the 'lower town' (*pars inferior*) in Roman cities, including Pula, was predominantly occupied by lower-standard residential insulae. These findings, together with the proximity of the Forum and the presence of drinking water sources (documented wells in the 19th century) near the coastline, support the hypothesis that higher-status architecture was located in this area during Roman period. This raises the question about the extent to which later block-based development corresponds with underlying Roman urban fabric.

Given this context, any future intervention should begin with comprehensive archaeological investigations. The fact that the area is currently undeveloped allows for such investigations to be conducted systematically, without disruption, to existing structures. This is particularly pertinent considering the valuable Roman and medieval valuable remains were discovered within Block 21 and Block 22.

Until the 19th century, Block 21 was defined by its exclusive coastal position and contact with the sea (although largely behind the city walls). This connection was severed through coastline reclamation and shipyard construction. Over the course of 80 years in the 19th century (Fig. 9), progressive infill along street frontages (including the closure of block corners), alongside a continuous increase in built density. This process was accompanied by the reduction of green spaces and their disconnection from the streets. The complexity of spatial articulation fluctuated significantly over time, reflecting alternating phases between growth and decline. The state of maximum built density prior to wartime bombing does not necessarily signify the peak in development, but rather a certain degree of degradation.

The current condition – an open park – is a relatively recent phenomenon, emerging only after the destruction caused by World War II bombings, the subsequent clearance of ruins, and the landscaping efforts of the 1950s. As such, the park represents a break in continuity within the city's collective memory. The transformation of the original 1953 park idea is documented through several phases (Fig. 16), but the underlying causes of the present condition are best understood through the composite map. It reveals that most of the thriving trees today are concentrated in areas that remained undeveloped (1898) or along its edges. An exception is the tree row along Flacius Street, where it is evident that the removal of all underground structures from previous construction was consistently implemented. Additionally, the documented presence of wells/sources/underground waters, has undoubtedly significantly contributed to the relatively high quality of the existing vegetation.

In general, it can be concluded that present vegetation composition is more a result of objective (unfavourable and favourable) circumstances of the planting micro locations than of any deliberate compositional effort. It can also be assumed that previous unsuccessful plantings have very likely left their mark in almost all parts of the block on archaeological remains from all earlier periods. Recorded archaeological remains are found both beneath 19th and early 20th century buildings and partly within the then unbuilt areas.

Established and assumed differences in the block structure throughout history today raise questions regarding the future articulation of this important space in the very centre of the modern city. This problem has also been recognized in urban planning regulations. According to current building conditions for Block 21, areas outside the buildable zones are subject to mandatory additional research – archaeological, historical, urban, and conservation-related – prior to any further development. Such investigations will form the basis for evaluating the location and, where appropriate, for reconstructing the historical urban matrix through typological interpolation or reconstruction / reinterpretation. Importantly, any future construction is subject to the outcome of an urban-architectural competition. Until such a process is completed, only maintenance interventions are permitted.

Conclusion

The historical and spatial evolution of Block 21 – today the biggest part is occupied by the City of Graz Park – offers a unique insight into the layered urban development of Pula. From its ancient origins and dense historical fabric to its transformation into a green space after World War II, the block reflects key moments of continuity, destruction, and reinterpretation.

If the City of Graz Park is considered primarily as a realized landscape concept based on Kolacio's 1953 vision, it is important to note that the original idea of a unified green space, acting as a buffer zone between the city and the industrial complex along Flacius Street, has been significantly compromised. The insertion of parking areas and the gradual erosion of landscape elements have diminished both its spatial clarity and symbolic intent.

Alternatively, if Block 21 is viewed as a historically dense, two-part urban block – divided by the former Tradenik Street and positioned between the Forum, the Old Market, and Sergijevaca Street – the absence of any meaningful reconstruction (apart from one preserved building) fails to support the role this space historically held within the city structure. In particular, the lack of defined urban fronts toward Sergijevaca Street and the Old Market diminishes the spatial character and public value of these prominent areas.

This issue was previously acknowledged in proposals by Goran Detelić (1991) and the Implementation Urbanistic Plan "Old Town of Pula" (1992), both of which offered valuable ideas that remain unrealised. These concepts contain qualities, such as the balance between open space and architectural definition, that should be seriously reconsidered in shaping the future vision for Block 21.

The exceptional historical layering of Block 21 positions it as a valuable test ground for integral conservation, whereby historical urban memory, archaeological heritage and contemporary design can interact productively. Rather than privileging either preservation or development, the future of this space should be shaped through rigorous interdisciplinary research and competition-based design processes.

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Illustration sources

Fig. 1 Rechner Dika, 2024
Fig. 2 https://geoportal.dgu.hr/ [Accessed: 20.3.2025.]
Figs. 3, 12 Modus d.o.o. (2016) / adapted by Rechner Dika
Fig. 4 https://pulappp.wordpress.com/category/venecija/ [Accessed: 15.3.2025.]
Fig. 5 HR-DAS
Figs. 6-8 CP-UPS
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