Figure 1: Terracing in the city centre of Kecskemét OWN EDITED FIGURE



ABSTRACT spontaneous and partly deliberately designed, interlock-The Main Square has always played a prominent role in ing with each other. The main square is also an exciting the urbanisation process of Kecskemét, and any urban part of the city because of its walls, thanks to the varintervention in the square would have a long-term impact. ied architectural style of the buildings these walls are The city's community life mainly takes place here, and comprised of. Kecskemét's architectural ensemble in its the complex of buildings and squares that have developed main square is unique in Hungary, as the urbanisation over the course of history provide an impressive and worof the town post-German Reunification was completed thy setting. The development of its open space system and much later, around the turn of the millennium, and the its square walls have always been influenced by social townscape was shaped by the Art Nouveau architectural and economic synergies, and all significant changes in the trends at the turn of the century, rather than Historicism historical centre of Kecskemét can be traced and mapped [1]. The development of the characteristic image of the in the appropriate architectural and landscape architectown square and the prosperity of Kecskemét around the dawn of the 20th century was due to the city's two tural spatial formations. Typically, changes in the structure and use of space have led to the gradual emergence progressive, far-sighted and modern mayors, Peter Lestár of certain groups of elements of municipal green infra-(1819-1896) [2] and later Elek Kada (1852-1913) [3], who structure in the main square complex. created the financial and economic basis and regulatory framework for town planning. The boundaries of the com-Keywords: Kecskemét, main square, urban open space plex town square system cannot be precisely defined: the core is formed by Szabadság Square and Kossuth Square, INTRODUCTION which themselves consist of several smaller segments, The historical city centre of Kecskemét is one of Hunsquares and promenades, while the central square is gary's most beautiful architectural and urban planning connected to the central part by additional squares and ensembles, a conglomeration of amorphous spaces, partly promenades. The historic city centre is defined by seven

A KECSKEMÉTI FŐTÉR FEJLŐDÉSTÖRTÉNETE ÉS 7ÖLDINFRASTRUKTÚRA S7FRFPÉNFK VÁLTO7ÁSA THE DEVELOPMENT HISTORY OF THE MAIN SQUARE IN KFCSKFMÉT AND THF CHANGING ROLE OF GREEN INFRASTRUCTURE

ERDÉLYI REGINA | SALLAY ÁGNES

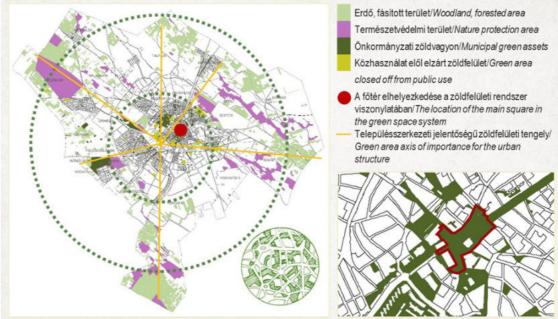
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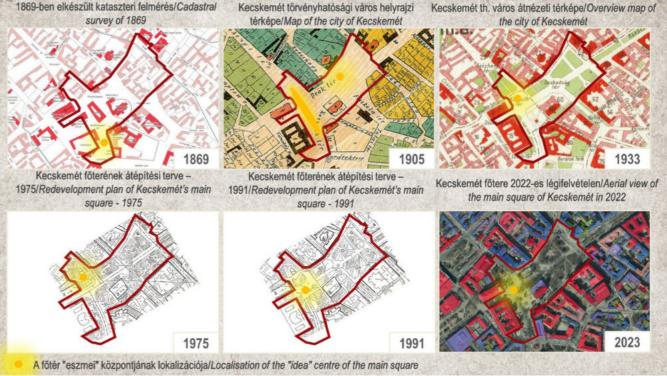
Kecskemét urbanizációs folyamatában a főtér mindig is kiemelt szerepet játszott, a téren történő minden városépítészeti beavatkozás hosszútávon is érezteti hatását. A város közösségi élete javarészt itt zajlik, amelyhez a történelem során kialakult épület- és téregyüttes mutatós és méltó keretet ad. Szabadtér-rendszerének és térfalainak alakulása mindig társadalmi és gazdasági szinergiák hatására történt, és igazolható, hogy Kecskemét történelmi központjában a társadalom fejlődésével együtt járó változások az építészeti és tájépítészeti térformálásban is megjelentek. Jellemző, hogy térszerkezeti és térhasználati módosulások maguk után vonták a települési zöldinfrastruktúra egyes elemcsoportjainak fokozatos megjelenését a főtéri téregyüttesben. •

Figure 2: The main spatial elements of Kecskemét's green space system OWN EDITED FIGURE. BASE MAP SOURCE: INTEGRATED URBAN DEVELOPMENT STRATEGY OF THE CITY OF KECSKEMÉT (2014), KECSKEMÉT CITY DEVELOPMENT LTD, KECSKEMÉT

Figure 3: Localisation of the "ideological" centre of the main square by period

OWN EDITED FIGURE, SOURCE OF BASE MAPS: CADASTRAL SURVEY OF 1869 (HUNGARIAN NATIONAL ARCHIVES, BÁCS-KISKUN COUNTY ARCHIVES, XV.1.A.1 .86,442-461, 1-19, 1:2500), GUSZTÁV RIHOCSEK. MAP OF THE CITY OF KECSKEMÉT (HUNGARIAN NATIONAL ARCHIVES. XV. 1. A. 1 502, 1:10000), OVERVIEW MAP OF THE CITY OF KECSKEMÉT (HUNGARIAN NATIONAL ARCHIVES, XV. 1. A. 1 129, 765, 1:10000), REDEVELOPMENT PLANS OF KECSKEMÉT'S MAIN SQUARE, 1975, 1991 (ARCHITECT'S WORKSHOP DESIGN, INVESTMENT AND SERVICE LTD. (1994), KECSKEMÉT), AERIAL VIEW OF THE MAIN SQUARE OF KECSKEMÉT IN 2022 (MUNICIPALITY OF THE CITY KECSKEMÉT WEBSITE)





squares ("the ensemble of seven squares"), which were formed in the same period in history, and by Deák Ferenc Square, which was created in the 1950s [Figure 1].

The most precise boundaries of the square complex are the churches built in the Middle Ages and in the 16th and 17th centuries, and the representative institutional buildings and tenement houses built in the late 1800s and early 1900s. The area delimited by the square walls covers almost five hectares. Kecskemét's current green space system fits in with the city's traditionally ring-shaped, single-centre urban structure [Figure 2]. The green areas are thus arranged in a ring and radius formation: the central inner area is characterised by mosaic, island-like green areas (Széchenyi Square, Katona József Square, Railway Station Garden, Gyenes Square), which are the result of the growth of the ring system on the original radius urban structure, while the individual functional spatial elements are connected by roadside green areas and their facades (Rákóczi street) and the green areas of the main square system.

MATERIAL AND METHOD

The research involved a literature review and plan and map analysis. In the course of the review of the city's history, monographs, journal articles and plans about Kecskemét were analysed, and the changes affecting green spaces and the plant species used in the given period were revealed on the basis of contemporary pictorial sources in the absence of written sources. Literature data were mapped onto a map of the city in order to make the spatial changes easily understandable. For the map analysis, we used both military surveys and a plan of the current town square. The results of the research have been classified into eras, identifying the most important boundaries that have determined the development of the current appearance of the town square and its current green infrastructure.

RESULTS

In the historical city centre, the structure of the main square has basically undergone three major changes due

to socio-economic processes, which have also entailed the relocation of the "ideal" centre of the square [Figure 3]. The first was the extension of the main square itself between 1893 and 1896, while the other two changes took place after World War II.

As a result of the research, we identified three periods in the development of Kecskemét's main square:

- from the creation of the main square to 1914;
- the period between the two world wars; and
- from the Second World War to the present day.

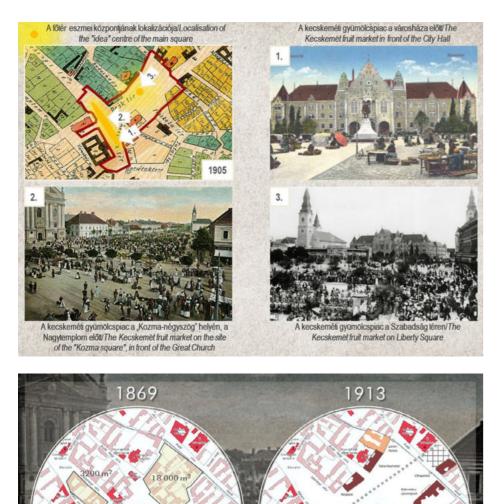
THE CREATION AND DEVELOPMENT OF THE MAIN SQUARE AS WE KNOW IT TODAY UP TO 1914

Szabadság Square, Kossuth Square and Széchenyi Square were already built-up areas in 1880, but they took their present form after the market square at the junction of the commercial roads was laid out and rebuilt [4]. In the past, the centre of the town had merely been a spontaneous junction of roads from the settlements around the then market town.

By the 19th century, a civilized nucleus had developed in the centre of the giant village, and the town centre was filled with new buildings: new churches, a monastery, a town hall, shops, a butcher's and mills were built. Being a clustered settlement, the new buildings were erected without any ordering principle and, as the 1869 map shows, the town centre was a spontaneous cluster of small and large squares. The new services and growth of the municipal apparatus required new buildings, which could only be achieved by reorganising the structure of the town centre.

In addition to the social processes, the boom in cultivation in sandy soil -the result of the phylloxera that devastated traditional vineyards - in turn led to a boom in the local economy in the 1890s, with famous markets and significant exports [Figure 4] [6]. In order to accommodate the ever-growing market, in 1889 the town assembly ordered a financial and planning framework to be drawn up to expand the market area, and the plans were entrusted to Ferenc Kerekes, chief engineer [5].

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1. Historizáló kert/Historicising garden

- 2. Népbank/People's Bank
- 3. Szabadság téri piac/Liberty Square Market
- 4. Újkollégium/New College 5. Rákóczi út/Rákóczi street 6.
 - Cifrapalota/Ornamented Palace

- Figure 4: The fruit market of Kecskemét at the beginning of the 20th century
 - SELF-EDITED FIGURE, SOURCE OF POSTCARDS: POSTCARDS FROM THE ZEMPLÉN MUSEUM'S PICTURE ALBUM VIA THE HUNGARICANA PUBLIC COLLECTIONS PORTAL, NATIONAL SZÉCHENYI I IBRARY, SOURCE OF BASE MAP: GUSZTÁV RIHOCSEK, MAP OF THE CITY OF KECSKEMÉT, 1905 (HUNGARIAN NATIONAL ARCHIVES, BÁCS-KISKUN COUNTY ARCHIVES, XV. 1. A. 1 502, 1:10000
 - Figure 5: Changes in the layout of the main square between 1869 and 1913
 - SELF-EDITED FIGURE, SOURCE OF BASE MAP: MAP BASED ON THE CADASTRAI SURVEY OF 1869 (HUNGARIAN NATIONAL ARCHIVES, BÁCS-KISKUN COUNTY ARCHIVES, XV.1.A.1.86,442-461, 1-19, 1:2500)
 - Figure 6: View of Szabadszág Square SOURCE OF POSTCARDS: ZEMPLÉN MUSEUM'S PICTURE LIBRARY VIA HUNGARICANA PUBLIC COLLECTIONS PORTAL, NATIONAL SZÉCHENYI LIBRARY

The plans were implemented in phases, with several modifications, taking into account the existing church, service and administrative buildings that make up the existing square wall. The north-eastern boundary of the planned square was already defined by the Synagogue and the former Beretva Hotel, and to the south-west by the Great Roman Catholic Church and the new Town Hall. By the mid-19th century, the old town hall was no longer able to cope with the increased official needs, and a tender was launched to design and budget for a new town hall. The winning design was submitted by Ödön Lechner and Gyula Pártos, and the Town Hall was built between 1893 and 1897 [1, 7].

Due to the expansion, the block of flats in front of the Synagogue and the former Beretvás Hotel, the Roman Catholic Church shop, Buttinger's pharmacy and Kozma Square, also consisting of flats, had to be appropriated and then demolished [Figure 5]. In 1876, the headquarters of the Savings Bank Association was built, the main façade of which also defined the north-western boundary of the square to be built. Dimó House and the Casino Block had to be demolished on the north-western boundary of the square in order to create a unified design, and the Commercial Credit Institute and People's Bank were built in their place in 1912 [5, 23]. A straight avenue was needed to connect the fairground with the railway traffic, and this was built at the turn of the century with the construction of the 42m-wide, 500m-long Rákóczi street. Between 1910 and 1913, three other large and important buildings were constructed, creating the missing walls of Szabadság Square. Luther Palace was built by the local Evangelical congregation in 1910-11. Opposite this, the Calvinist Church had a huge, imposing building called the New College built in 1911-13 [9-10].

The city's economic prosperity and the high level of construction activity were halted by a major natural disaster, which also prevented the city from continuing its dynamic development: on 8 July 1911, the city weas shaken by an earthquake, estimated at 5.6 on today's Richter scale, causing severe damage to private and public buildings. Due to the budget deficit resulting from the expenses necessary for the reconstruction, the started and planned large-scale investments had to be postponed [11]. In addition to the financial loss, the city was further burdened by the death of Mayor Elek Kada in 1913, and after him, that of Ödön Lechner in 1914 [12]. Kecskemét's golden age finally came to a complete end with the outbreak of World War I.

As a result of the renovations, the square area was extended by more than $24,000 \text{ m}^2$ and by the turn of the century, a large square consisting of three smaller ones had been created [Figure 5]. In the demolished town centre square, the thoroughfares were paved with cobblestones $(12,000 \text{ m}^2)$ and the market square with bricks $(17,400 \text{ m}^2)$ [5]. Tree planting in the main square began as early as 1897: over the decades, they were mainly used to line the roads and to separate and shade the various kinds of markets. Trees were planted throughout the town by the gardener Károly Bajnóczi, who was appointed the town's chief gardener in 1903 [5]. Typically, trees with round crowns (probably of the genus Sophora, Acer, Catalpa, Prunus) were planted, as depicted on postcards of the period. A comparison of postcards after the turn of the century shows that the expansion of the market area (Szabadság Square) and the change in the transport network led to more and more trees being planted [Figure 6].

Until the late 1940s, most of the main square consisted of single-storey structures, with a tree canopy of roundtopped trees. Multi-storey planting (shrubs and flower

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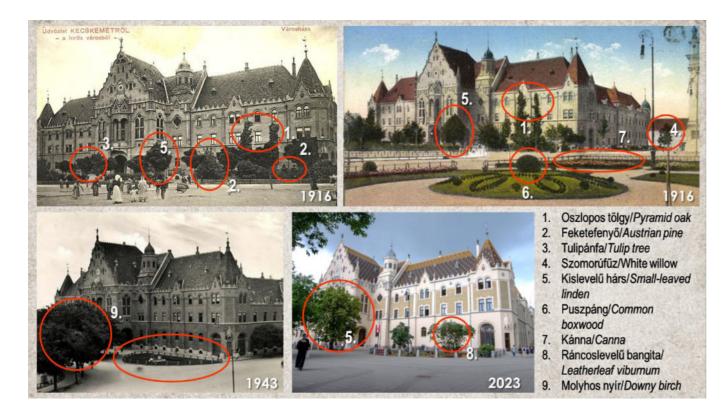
Figure 7: View of the Town Hall

SOURCE: HUNGARICANA - ZEMPLÉN MUSEUM'S PICTURE LIBRARY VIA THE PUBLIC COLLECTIONS PORTAL, NATIONAL SZÉCHENYI LIBRARY, WWW.SZECESSZIOSMAGAZIN.COM, WWW.BAON.HL

- ►► Figure 8: Vegetation of Szabadság Square
- SOURCE: EGYKOR.HU, FORTEPAN / GYÖRGY ÁDÁM DR, FORTEPAN / LUDWIG KELLNER **>> Figure 9:** Vegetation of Kossuth Square and the park in front of the

Aranyhomok Hotel

SOURCE: FORUM.INDEX.HU, EGYKOR.HU



beds) was only found in the historicised small garden in front of the People's Bank and in the four ornamental gardens in front of the Town Hall. The ornamental gardens in front of the Town Hall were densely planted with the fashionable plants typical of the historicism (Quercus robur 'Pyramidalis', Pinus nigra, Liriodendron tulipifera) [Figure 7]. The change of habitat of the Tilia cordata planted for the millennium is clearly visible from the pictorial sources, and the tree is still present today.

THE PERIOD BETWEEN THE TWO WARS

Between the two world wars, the use of space in the main square was still dominated by the fruit market, but the core of the function shifted from Kossuth Square and the spaces developed different functional characteristics. Széchenyi Square was the producers' market, Szabadság

Square and Rákóczi street the consumer (mixed) market [6], and various shops were located on the ground floor of the multi-storey buildings fronting the square. Széchenyi Square was used more by the wealthy and the elite, while Liberty Square was used by the less wealthy. In 1949, the market, which played an important role in the life of the city, was finally moved away from the main square to an area cleared out of the eastern side of the Piarist monastery garden [13]. In 1929, a two-storey Calvinist tenement building was built as a south-eastern square wall next to the Calvinist Church on the corner of Kálvin Square, which was considered the outflow of the square complex [13]. Although the main square was already landscaped in 1897, no landscaping took place until 1949, except for the historicising rail in front of the People's Bank, because the high market turnover and the lack of water supply did not allow it [5]. The landscaping of Szabadság Square was

vásrózsák/Bed roses (Rosa sp.) 2. Ezűstfenyő/Blue spruce (Picea pungens)
 5. Kerti gyöngyvessző/Bridal wreath spirea (Spiraea x v
 3. Közönséges nyír/Silver birch (Betula pendula)
 6. Közönséges orgona/Common lilac (Syringa vulgaris)

Jegenyenyár/Lombardy poplar (Populus nigra 'Italica') Kerti gyöngyvessző/Bridal wreath spirea (Spiraea x vanhouttei



Szerb luc/Serbian spruce (Picea omorika) Vörösfenyő/European larch (Larix decidua)

Tollas celózia/Plumed celosia (Celosia argentea var. plumosa)

started immediately after the water supply was provided, and the market was relocated to this area. In front of the People's Bank, a circular group of flowers and low shrubs planted and trimmed in a solitary or geometric pattern formed the green area, along with grassy beds. Photographs taken from the tower of the Great Roman Catholic Church and from Szabadság Square [Figure 8] show that the style of the historicised garden area was simplified after the devastation of World War I, to make it easier and cheaper to maintain. The photograph of the church tower shows the strengthening of the trees lining the Szabadság Square market and the boulevard through the main square, and the felling of the tree line along the diagonal axis of traffic in front of the New College. In the ornamental gardens in front of the Town Hall, the vegetation was completely eradicated [Figure 7]. The Betula pubescens in front of the Town Hall was replaced by Celtis occidentalis.





CHANGES IN THE HISTORIC **CITY CENTRE AFTER 1945**

Immediately after the Second World War, in 1946, a monument to Soviet heroes was built on Szabadság Square, in line with the ideology of the time. The obelisk, covered with black granite slabs, was placed on a pedestal rising from the ground level, with a ceramic-clad parade ground in front of it [13]. The monument was installed at the centre of a spatial composition structured on axial symmetry, a rigid composition that replaced the historicised spatial part of the earlier geometric forms.

In 1950, Kecskemét was promoted from a city of jurisdiction to a county seat under the administrative territorial reforms. Due to the space requirements of the new public institutions, the historic main square was enlarged in a westerly direction, and Deák Ferenc Square was

created with its new commercial, administrative and cultural institutions [5].

With the provision of the water supply, the landscaping of Szabadság Square was immediately started and the market was relocated from this area. Contemporary postcards show that while the trees in the western part of the square were planted in regular rows, Szabadság Square was landscaped with irregularly arranged groups of trees [Figure 8]. This part of the square is planted with Betula p., Picea pungens, Populus nigra 'Italica', Celtis: two of the poplars are still present in this part of the square, as are the hackberry hedges that line the 'Mende axis'. In the centre of the square, a piece of circular water architecture ("Frog Pond") was created, with large flowerbeds lining the square and the surrounding promenade. Presumably to minimise maintenance costs, these flower beds were removed in the following decades. It was common to enclose these larger green areas for safety reasons (the parks were bordered by public roads) and to protect them from vandalism (mainly trampling).

The market function was maintained in Kossuth Square and the area in front of today's Aranyhomok Hotel, which is connected to Szabadság Square. In 1959, Kossuth Square was landscaped by a social project with an architectural design, with the statue of Kossuth in the centre, asphalt paved walkways, green areas lined with rose beds and planted with silver pines, whip-lash lamps and candelabra fluorescent tubes [14]. The square in front of the Aranyhomok Hotel was the site of the fruit market until 1957, and then the central bus station until 1962, which was demolished before the hotel was opened The landscaping of the square was completed after the hotel was built in 1962-63, based on the plans of architect György Wossala and mechanical engineer Károly Szücs, with the planting of pre-grown ground pines and birch trees, a fountain and a water basin [5]. The fashionable evergreen species of the 1970s (Juniperus virginiana 'Grey Owl', Cedrus atlantica 'Glauca', Picea pungens) were introduced here, with ornamental beds being planted first with roses and then with the iconic Celosia argentea var. plumosa [Figure 9]. The last major change in the structure of the current spatial system was the construction of the Aranyhomok Hotel. The funnel-shaped Széchenyi Square of that time was replaced by a piazza, which today is Széchenyi Square [15]. Further changes occurred within the square walls. In 1958, the Beretvás Hotel, built in 1856, was demolished due to its obsolete structure,

and the OTP Head Office Building was built in its place in 1968-70 [5]. The Art Nouveau buildings harmonise well with the old ones (Baroque churches), but the insertion of modern buildings into the main square walls still has a disharmonious effect. The character of the grid-like mass of the Aranyhomok Hotel is somewhat offset by the green space created.

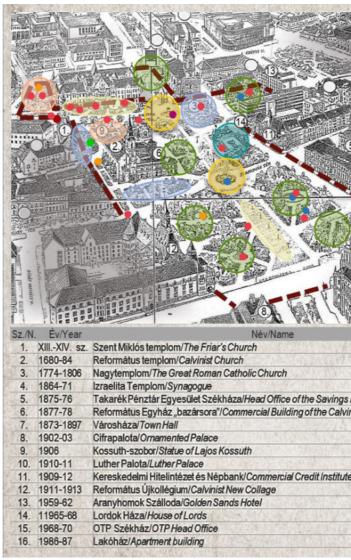
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By the end of the 1970s, the main square had become an important traffic junction, with heavy road traffic, the Békéscsaba and Dunaföldvár roads running into it, as well as the traffic of 26 streets. The high presence of motorised traffic, air pollution and noise pollution made it impossible to relax in the park in Szabadság Square, to enjoy the safe flow of pedestrian traffic or to enjoy the Art Nouveau square wall complex, and the whole square was affected. To relieve the congestion, in 1976 the city council decided to start building an internal rail system based on the General Plan proposal and to convert the historic square into a pedestrian zone [15]. At this time, the town centre was rehabilitated with a focus on historic preservation - based on the designs of architect Gábor Farkas, landscape and garden architect Antal Mayer and sculptor Gusztáv Pálfy - and the square was restored to its current state. Kéttemplom köz, a pedestrian street with the renowned Kodály Institute, is an integral part of the central car-free space. At the mouth of Kéttemplom street, a ruin garden was created on the northern side of the Franciscan monastery complex by demolishing the bazaar row [13].

By the end of the 1990s, owing to functional changes (e.g. the demolition of the Soviet monument) and wear and tear, the main square and its immediate surroundings needed cleaning up. The square complex has been completely rebuilt in parts, both in terms of paving, utilities, street furniture, street lighting and green areas. Kossuth Square was rolled back, the polygonal green areas lined with rose beds were removed and replaced by much smaller, circular, curved small stone paved areas with prominent tree shade. This design detail, popular in the 1970s, has the advantage today of being able to create multi-storey, representative planting without compromising the current public use of the square (fairs, festivals). As the final phase of the overall square reconstruction, Szabadság Square and its surroundings (Kalvin Square, Kéttemplom street) were renovated in 2015 as part of the Functional Urban Regeneration Programme [17]. Between 22-27 June 1982, an international ICOMOS colloquium on "The monuments of the last hundred years" was held

| From the creation of the main square to 1914 | Between the two world wars | From the Second World War to the 1990s | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| The main square is mainly planted with trees with globular crowns (Acer p. 'Globosum', Catalpa sp., Prunus f. 'Globosa') and Sophora japonica | No major development of green infrastructure, but an increase in the number of trees lining roads and various types of market | In 1949, the landscaping of Szabadság Square was started with irregularly arranged groups of trees | | |
| Historicising ornamental garden in front of the People's Bank with flower beds and low shrubs | | In 1959, Kossuth Square was landscaped, and in 1962, the area in front of the Golden Sands Hotel was landscaped with three levels of vegetation | | |
| Planting of the ornamental gardens in front of the City Hall with trees and medium-height shrubs | | In 1976, new green areas were created during the conversion into a pedestrian zone | | |
| | | In the 1990s, large-scale priority tree planting was introduced | | |

Figure 10: Functional division of the main square, elements of the square wall OWN EDITED FIGURE



| O CONT | Protokolltér/Protocol | | |
|--------------------------------|------------------------------------------------|--|--|
| ATT | square | | |
| | Templomtér/Church | | |
| - The second | square | | |
| The Martine | Rendezvénytér/Event | | |
| | | | |
| | square | | |
| and all a second and | Időszakos vásártér, performansztér/Seasonal | | |
| A DECEMBER OF DECEMBER | fairground, performance | | |
| | square | | |
| | Park/Park | | |
| | Sétány/Promenade | | |
| | Szökőkút. | | |
| A.A | vizmedence/Fountain, | | |
| 1 | water pool | | |
| | Szobor/Statue | | |
| | Emlékmű/Monument | | |
| 4 5 5 | Kálvária/Calvary | | |
| | Romkert/Ruin garden | | |
| | Iránydomb/0 km Stone | | |
| | | | |
| | Tervező/Planner | | |
| | Ismeretlen/unknown | | |
| | Ismeretlen/unknown | | |
| | Oswald Gáspár | | |
| ant Association | Zitterbart János | | |
| Bank Association ist Church | Pártos Gyula Pártos Gyula | | |
| isteriuren | Lechner Ödön, Pártos Gyula | | |
| 25.210.000 | Márkus Géza | | |
| Laster Concerns | Telcs Ede | | |
| Matter Line Trail | Mende Valér | | |
| and People's Bank | Korb Flóris, Giergl Kálmán | | |
| | Mende Valér | | |
| 341.27 | Janáky István, Albert Jenő | | |
| | Neuhauser László | | |
| | Neuhauser László | | |
| | Farkas Gábor | | |

A KECSKEMÉTI FŐTÉR FEJLŐDÉSTÖRTÉNETE ÉS ZÖLDINFRASTRUKTÚRA SZEREPÉNEK VÁLTOZÁSA THE DEVELOPMENT HISTORY OF THE MAIN SOUARE IN KECSKEMÉT AND THE CHANGING ROLE OF GREEN INFRASTRUCTURE

Figure 11: Percentage of surface qualities in the main square OWN EDITED FIGURE Figure 12: NDVI vegetation index for the main square and its surroundings OWN EDITED FIGURE Figure 13: Current vegetation of the main square in Kecskemét OWN EDITED FIGURE BASED ON OWN FIELD SURVEY

in Budapest and Kecskemét [18]. The main square of Kecskemét and its surroundings were declared an "area of monumental significance" by the then Ministry of Environment and Regional Development and the Ministry of Culture and Public Education.

THE MAIN SQUARE IN KECSKEMÉT TODAY

The main square currently performs sacral, representational, recreational, relaxation and aesthetic functions. The division of space according to its purpose is illustrated in Figure 10. The main square is decorated with four water basins, the ruin garden, 17 statues, three monuments, the statues of the Calvary and Iránydomb (Beacon hill) [Figure 10].

Representing the formal solutions of the 1970s, the square is defined by a straight structural axis with a northeast-west orientation - a wider corridor created on the site of the former main road - three transverse axes, as well as circular terraces and diagonal pedestrian walkways [Figure 11]. The square is divided into two parts with two different characters. In the western part, there are larger continuous paved pedestrian surfaces, while the eastern part is more park-like; the landscaped areas (e.g. Szabadság Square, the green space in front of the Aranyhomok Hotel) and their spatial functions have been retained. After the demolition of the Soviet monument, the paved area between the Calvinist Church and the old People's Bank was transformed into a performance space ("Square in Square"), designed by Gábor Farkas [16]. A fountain was built at the intersection of the axis connecting Kálvin Square and Arany János street and the main axis, and a landmark dome was built at the intersection of the promenade in front of the Town Hall on Kossuth Square and the main axis. The third transversal axis connects the Luther Palace and the Calvinist New College, named after the designer of the two buildings, Valér Mende ("Mende axis").

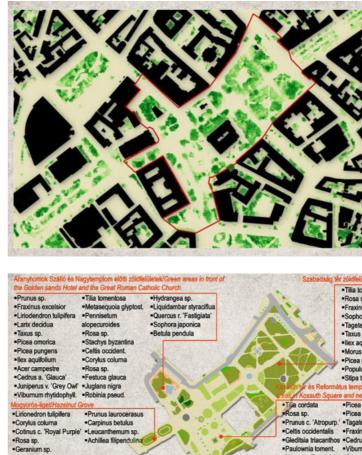
The main square is chiefly defined by its abundant and taxonomically rich vegetation. 22% of the almost 50,000 m² of the square is covered by wooded grassland, 9% by ornamental gardens and 2% by wooded shrubs [Figure 11]. The

square contains nearly 250 trees and shrubs, with a total value of HUF 1.4 billion [19]. Facades are more visible in the built-up area. Tree groups can be found in the raised beds bordered by small pebbles, typical of the 1970s. Despite the major structural alterations, it is noticeable that the tree lines and tree groups still have a separating function, further dividing the spaces created by the built-up square walls. The green area in front of the Aranyhomok Hotel has a three-level plant stand, as does the green strip along the former bazaar row separating the traffic axes with the remaining trees of the tree line along the old boulevard. All these are clearly visible on the NDVI vegetation intensity map; the average vegetation index of the main square complex is 0.22 [Figure 12].

The typical species in the N-S axes and in the hedges west of Arany János street is Celtis occidentalis, while Sophora japonica is the species common to Rákóczi street up to the axis of Arany János street. The oldest specimen, the Millenium memorial tree, is 127 years old. The "Hazelnut grove" between the Town Hall and the Great Roman Catholic Church consists of a double Corylus colurna tree planted in 1978. More than three specimens of the genera Betula, Ginkgo, Liriodendron, Morus, Picea, Fraxinus, Prunus, Acer, Quercus and Tilia have been planted as specimens in the bare ground. The main square is also home to a number of introduced taxa (Morus alba 'Pendula', Styphnolobium japonicum 'Pendula', Populus nigra 'Italica', Prunus serrulata 'Amanogawa') [20]. Liquidambar styraciflua, Paulownia tomentosa, Sequoiadendron giganteum, Ulmus minor and Platanus acerifolia are also present in low numbers, with a total of five trees of local historical value.

The number of woody plants with shrub habitus is low, with 27 shrubs or groups of shrubs of the same species, with an average age of 40 years. Berberis thunbergii and Ligustrum ovalifolium appear as mass shrubs, and Paeonia lactiflora and Viburnum rhytidophyllum in front of the Town Hall are of considerable botanical value. The flower beds cover 440 m² and the dominant taxa in the annual and perennial beds are Salvia, Celosia, Tagetes, Begonia, Rudbeckia, Gaura and Ipomoea. The conversion of part of the annual flowerbeds (about one third) into rose beds





Rose sp. Viburnum Miscanthu Aesculus Begonia s Impatiens

| in sands Hotel a | nd the Great Roman Cat | holic Church | | Tilia tomentosa | Festuca glauca |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| s excelsior dron tulipifera cidua p. morica ungens ifolium mpestre a. 'Glauca' us v. 'Grey Owl' | Tilia lomeniosa Metasequoia glyptost. Pennisetum alopecuroides Prosa sp. Stachys byzantina Celtis occident. Confus columa Prosa sp. Festuca glauca -Loglans nigra Robinia pseud. | •Hydrangea sp. •Liquidambar styraciflua •Ouerous r. Fastigiata' •Sophora japonica •Betula pendula | | Rosa sp. Fraxinus excelsion Sophora japonica Tagetes sp. Tasus sp | Hemerocallis sp. Hemerocallis sp. Carpinus Carpinus Carpinus Carpinus b. Aryamidalis Acer saccharinum Gingko biloba Celtis occidentalis Zöttfekületek/Green |
| licet/Hazelnut G | and the second se | N. 10 10 | •Tilia corda | | |
| n sp. | Prunus laurocerasus Carpinus betulus Leucanthemum sp. Achillea filipendulina | | Rosa sp. Prunus c. •Celtis occ •Cleditisal •Paulownia •Morus a. •Convallar | Picea pungens 'Atropurp.' = Tagates sp. identalis = Fraxinus excelsio triacanthos = Cedrus a. 'Glaucu = Volumnum rhytido = Pendula' = Ouercus robur ia majalis = Pennisetum alop. | Ligustrum oval. Acer platanoides Picea pungens Taxus sp. p. |
| n rhytidophyllum | Taxus baccata Taxus b. 'Stric | | Országzászló környezete/N Aesculus hippocastanum | ational Flag Monument surrou | ndings •Tilia tomentosa |
| us s. 'Yaku Jima' carnea 'Briotii' sp. s sp. | | a 'Maigrün' | Aesculus hippocastanum Tilia cordata Betula pendula Gaura sp., Rosa sp. Santolina chamaec. | Cedrus a. 'Glauca Pendula' Pinus mugo Cotoneaster sp. | |

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| nora japonica | Carpinus | | | | |
| tes sp. s sp. | Quercus r. 'Fastig.' | | | | |
| s sp. aquifolium | Paeonia lactiflora Carpinus b. | | | | |

A KECSKEMÉTI FŐTÉR FEJLŐDÉSTÖRTÉNETE ÉS ZÖLDINFRASTRUKTÚRA SZEREPÉNEK VÁLTOZÁSA THE DEVELOPMENT HISTORY OF THE MAIN SQUARE IN KECSKEMÉT AND THE CHANGING ROLE OF GREEN INFRASTRUCTURE

 Table 2: Plant species used from the creation of the main square

to the present day OWN DATA TABLE

| | | | | | | The terms of the from it e | - | | N |
|-------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | | The town square from its creation until 1914 | In between the two world wars | From World War II to the 1990s | Nowadays |
| | | | | | Shrubs | | · | · | |
| Trees | The town square from its creation until 1914 | In between the two world wars | From World War II to the 1990s | Nowadays | Mass-forming shrubs | - | Spiraea sp. (white) Syringa sp. | Berberis th. Ligustrum ov. Paeonia suffrut. Viburnum rhyt. Taxus baccata Platycladus orie. | Berberis th. Ligustrum ov. Paeonia suffrut. Viburnum rhyt. Taxus baccata Platycladus orie. Lonicera nitida 'Maigrün' Euonymus jap. |
| lley | Sophora jap. Acer p.'Globosum' Catalpa sp. Prunus f. 'Globosa' | Sophora jap. Celtis occident. Betula pubesc. | Sophora jap. Celtis occident. Tilia cordata Corylus colurna | Sophora jap. Celtis occident. Sophora jap. Corylus colurna Gleditsia triacan. Tilia tomentosa Carpinus betulus 'Pyramidalis' | Solitaries | Buxus semperv. | _ | Taxus baccata Viburnum rhyt. Juniperus virginiana 'Grey Owl' Xanthoceras sorbifolium | Viburnum rhyt. Taxus b. 'Anna' Taxus baccata 'Stricta Viridis' Cotinus c.'Royal purple' Ilex aquifolium Juniperus virginiana 'Grey Owl' |
| Solitary trees/ irregular groups of trees | | Salix alba P M C A S S A F F L C C | Tilia cordata (Millenium ef.) Betula p. Picea pungens Populus nigra 'Italica' Metasequoia gl. Quercus robur Aesculus hippo. Salix alba Acer saccharin. Picea omorika 'Pendula' Fraxinus excel. Larix decidua Cedrus atlantica 'Glauca' Tilia tomentosa | Gingko biloba Prunus cerasifera 'Atropurpurea' Morus alba 'Pendula' Liriodendron tul. Liquidambar sty. Acer platanoides Tilia cordata Ulmus x holland. Quercus robour 'Fastigiata' Morus alba 'Macrophylla' Prunus sp. Acer campestre Juglans nigra Tilia cordata (Millenium ef.) Betula p. Picea pungens Populus nigra 'Italica' Metasequoia gl. Quercus robur Aesculus hippo. Salix alba Acer saccharin. Picea omorika 'Pendula' Fraxinus excel. Larix decidua Cedrus atlantica 'Glauca' Tilia tomentosa Aesculus carnea 'Briotii' | Roses | - | Bed roses | Bed roses | Rosa 'Cubana' Rosa 'Nostalgie' Rosa 'Aprikola' R. 'Chippendale' R. 'Drangerie' R. 'La Sevillana' Rosa 'Memoire' Rosa 'Memoire' Rosa 'Kosmos' R. 'Lions-Rose' Rosa 'Amica' R. 'Augusta Luisa' |
| | | | | | Perennials | Canna (pink.) | - | - | Pennisetum alop. Miscanthus s. 'Yaku Jima' Yucca filament. Iris sp. Stipa tenuifolia Festuca glauca Hemerocallis sp. Stachys byzant. |
| | | | | | Annuals | - | - | Salvia splend. Begonia cucull. Celosia argentea var. plumosa Tagetes sp. | Salvia g. 'Amistad' Celosia sp. Tagetes sp. Begonia sp. Rudbeckia sp. Gaura sp. Ipomoena sp. Impatiens sp. |

and the preparation of the technical/legal framework for the planting of roses in public spaces is under way. Direct park maintenance (management and maintenance of flower areas, grassing, shrubs, hedges, fountains) is carried out by the green area management department of Kecskemét City Management Nonprofit Ltd. Automatic watering systems are currently in operation in the ornamental gardens in front of the Town Hall, in the green areas next to the Calvinist Church, in front of the Aranyhomok Hotel and the Great Roman Catholic Church and in the *Mogyorós liget* ("Hazelnut Grove").

CONCLUSIONS

In the case of the eastern park-like area of the main square, the large mass of woody vegetation has now developed a well-closed canopy with the development of irregularly arranged groups of trees. The shading capacity of the vegetation in the main square can significantly reduce the warming of the enclosed areas and mitigate the urban heat island effect. In Kecskemét, per capita green space is 3 m^2 /person, which can be considered almost insufficient [19]. It can be said that there is a significant lack of public green space (at least 3-5 ha) in relation

to the population, and therefore the main square and its rich vegetation, designed for sacral, representational, recreational and aesthetic purposes, are an important element of the green infrastructure network in the city centre.

Looking at the average age of the stand, the vegetation is young, the main square has developed taxon-rich green areas, and a diverse stand has been established since the late 1990s [Table 2]. Some of the Japanese chestnut and oyster trees in the hedgerows are already senescent, and the condition of healthy individuals is deteriorating year

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by year due to increasing UV radiation and urban climatic factors (heat island effect, atmospheric drought). The oldest tree in the main square is the "Millennium Linden Tree", planted in May 1896 in front of the Town Hall. The crown base and the skeleton are decayed, the crown is one-sided and lateral, but with professional care, it can be maintained for several more years. Five of the pioneers have reached old age: Acer saccharinum, Betula pendula, Populus nigra 'Italica'. Most of the pine trees planted in the 1960s have been felled, but a few remain on Kossuth Square, on the green area in front of the Aranyhomok Hotel and next to the Calvinist Church. Although they are not native species, they should be preserved because of their important role in the landscape.

Today, there are no major social or economic factors that have a dominant impact on the morphology of the town square. In the course of time, the functional and visual system of the square complex, the order and way of using the public space, the gradual replacement of the vegetation in line with the use of the space, as well as the planned major investments affecting the institutions around the square - development of the Kodály Zoltán Music Pedagogical Institute in Kecskemét, the complex renovation and landscaping of the Katona József National Theatre in Kecskemét - will be modified by the integration of new open spaces or new spaces into the main square. The current local developments and design projects needed to influence the image of the main square are concentrated on Kossuth Square, including the fully renovated area in front of the Town Hall.

KNOWN BUT NOT YET IMPLEMENTED DEVELOPMENTS

The Celtis occidentalis alley in front of the Town Hall is ageing. More than 20 years ago, the horticultural expert opinion prepared as part of the planning documentation for the town square and its immediate surroundings stated that the tree line was in a critical condition, posing a risk of accidents [21]. Kecskemét City Management Nonprofit Ltd. has started to record the actual condition of the tree line by means of a FAKOPP survey. The trees have undergone multiple truncations, and some of them appear to be severely decayed even by a simple visual inspection. It is proposed to replace the tree line because of both technical and urbanistic considerations, and a renewal plan has already been drawn up. Along with the new tree line, a row of rain gardens of 8x2m per unit is planned in the form of a green strip.

The renovation of the Town Hall will also involve the reconstruction of its public front, side and back gardens. As an integral part of the building, the ornamental gardens are representative green spaces that further

enhance the castle-like character of the building, and have been an integral part of the building since its construction. The technical content of the restoration and improvement of the green areas is defined in the plan by green area unit, with the following elements: installation of an automatic watering system, installation of perennial ground-covering perennial grasses as turf, installation of annual, autumn-winter and specimen plants, restoration of the fence, repair and painting of utility elements, and construction of a rainwater silt trap for the rainwater collected from the Town Hall roof.

In the Kecskemét urban development plan, the extension of the pedestrianised area of the main square in all directions by increasing the green areas and creating an uniform image - keeping in mind climate-friendly planning principles - is a district objective, which requires the transformation of the city centre traffic and parking system (construction of parking garages, underground garages) [22]. Currently, the role of the footpath in traffic and urban planning is being rethought in order to further expand the zone for pedestrians and other soft transport modes. The aim is to create a city centre with a public space system consisting of public spaces, green spaces and traffic-relieved transport areas, largely paved or covered with trees, within a radius of up to 750 m from the historic city core [Figure 1]. •

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