

WORLD HERITAGE IMPACT ASSESSMENT

THE CITY PARK "LIGET BUDAPEST PROJECT" DEVELOPMENT
IMPACT ON THE BUDAPEST WORLD HERITAGE SITE'S
OUTSTANDING UNIVERSAL VALUE

BUDAPEST JANUARY 2018

DRAFTED: Updated by *Dr. Bela Nagy*, based on the impact assessment prepared by the **Forster Center** (Hungarian Heritage). Section 5. is the work of *Gabor Bazso, Endre Prakfalvi* and *Gergely Hajdu Nagy*.

Budapest, January 2018.

WORLD HERITAGE IMPACT ASSESSMENT:
 THE CITY PARK “LIGET BUDAPEST PROJECT” DEVELOPMENT IMPACT ON THE BUDAPEST
 WORLD HERITAGE SITE’S OUTSTANDING UNIVERSAL VALUE – 1ST UPDATE

Date of the assessment:	Budapest, January 2018
World Heritage site:	Budapest – The Banks of the Danube, the Buda Castle Quarter and Andrásy Avenue
Location of the planned intervention:	The buffer zone of the World Heritage site, as indicated on the Figure 4.
Geographic position:	N 47°30’53,66”, E 19°04’40,02” the North-East side of the World Heritage site.
Date of inscription on the World Heritage List:	1987 (COM 11) Budapest, the Banks of the Danube and the Buda Castle Quarter and 2002 (COM 26) extension by Andrásy Avenue and Its Historic Surroundings Including the Millennium Underground Railway REF: 400bis
The focus of the report:	The assessment of the impact of the Liget Budapest Project (“City Park”)
Citations:	Decision number 37 COM 7B.76 by the UNESCO World Heritage Committee made at its 37 th meeting requested the States Party to prepare a World Heritage impact assessment on the “Liget Budapest Project” (“City Park”). Heritage, urban planning, environmental, geodesic, park usage, tourism, economic and transportation development impact assessments prepared during the planning of the “Liget Budapest Project” under <i>Act CCXLII of 2013 on the Renovation and Development of the City Park</i> and Budapest Metropolitan Council Ordinance 32/2014.(VII.15.) Főv.Kgy. on the City Park Building Regulations.
Manager of the Liget Budapest Project:	Városliget Ltd. (City Park Property Development Company)
Cover page	Aerial photograph of the City Park (2013) (source: Városliget Ltd.)

SUMMARY

REASONS FOR THE EXAMINATION

The objective of this study is to satisfy actualization of changes that occurred in the period since the submission of the impact assessment drafted on the basis of decision number 37 COM 7B.76 of the UNESCO World Heritage Committee made at its 37th session in relation to the Budapest – The Banks of the Danube, the Buda Castle Quarter and Andrásy Avenue World Heritage Site, furthermore, decision number 41 COM 7B.46 of the UNESCO World Heritage Committee (with particular reference to Point 7.).

„46. BUDAPEST – BANKS OF THE DANUBE, BUDA CASTLE QUARTER AND ANDRÁSSY AVENUE (Hungary) (C 400bis) 1

Draft decision 41 COM 7B.46 (extract)

The World Heritage Committee,

1. Having examined Document WHC/17/41.COM/7B.Add.,

2. Recalling Decision 39 COM 7 B. 79, adopted at its 39th session (Bonn, 2015),

3. Welcomes the efforts made by the State Party to improve the protection of all components of the property and its buffer zone and encourages it to sustain these efforts to prevent any loss of authenticity and integrity due to the planned developments in the property or its buffer zone which could constitute a threat to the property;

...[...]

7. Noting that the State Party invited an ICOMOS Advisory mission in order to review and analyse all ongoing and planned interventions, recommends that this mission take place by end of 2017 and also urges the State Party to halt further permissions for major projects until this assessment has been undertaken;”

THE WORLD HERITAGE AND THE DOMESTIC LEGISLATIVE ENVIRONMENT

Protection of cultural heritage takes a key position in the legal system of Hungary as State Party. This protection is also stipulated in recently adopted legal regulations.

The Fundamental Law of Hungary – the Constitution (25 April 2011) guarantees the protection of cultural heritage.

The Fundamental Law of Hungary

“...We commit to promoting and safeguarding our heritage, our unique language, Hungarian culture, the languages and cultures of nationalities living in Hungary, along with all man-made and natural assets of the Carpathian Basin. We bear responsibility for our descendants; therefore we shall protect the living conditions of future generations by making prudent use of our material, intellectual and natural resources.

^{1 1} WHC/17/41.COM/18 | Cracow, 12 July 2017 | Decision adopted at the 41st session of the World Heritage Committee

We believe that our national culture is a rich contribution to the diversity of European unity...”

Article P)

“(1) All natural resources, especially agricultural land, forests and drinking water supplies, biodiversity – in particular native plant and animal species – and cultural assets shall form part of the nation’s common heritage, and the State and every person shall be obliged to protect, sustain and preserve them for future generations...”

The protection of the World Heritage Site – Budapest – the banks of the Danube, Buda Castle Quarter and Andrásy Avenue (1987, 2002) – is enshrined in further acts and other legal regulations.

Among the acts, the following are the most important (list does not claim to be complete):

- Act LXXVII of 2011 on World Heritage,
- Act LXIV of 2001 on the Protection of Cultural Heritage,
- Act LXXVIII of 1997 on the Formation and Protection of the Built Environment,
- Act LXXIV of 2016 on the Protection of Municipal Landscapes, furthermore

government decrees applicable in their implementation (list does not claim to be complete):

- Government Decree 104/2017. (IV.28.) on the Implementation of Regulations Pertaining to the Publishing of Advertisements Pursuant to the Act on the Protection of Municipal Landscapes,
- Government Decree 496/2016. (XII. 28.) on Regulations Pertaining to the Protection of Cultural Heritage,
- Government Decree 39/2015. (III. 11.) on Regulations Pertaining to the Protection of Archaeological Heritage and Monuments
- Government Decree 314/2012. (XI.8.) on Urban Development Concept, the Integrated Urban Development Strategy and Urban Planning Tools, and other Specific Urban Planning Legislative Measures,
- Government Decree 253/1997. (XII.20.) on National Urban Planning and Construction Requirements.

ACT LXXVII OF 2011 ON WORLD HERITAGE

Act LXXVII of 2011 on World Heritage stipulates provisions pertaining to the protection of outstanding universal values, determining the scope of responsibilities, authorizations, requirements for management, World Heritage management plans, including the provision of harmonization with urban planning, furthermore, it extends to World Heritage trusteeship with an interest in implementation and the financing conditions. The transitional provisions stipulate the requirements applicable in the period up until the adoption of the World Heritage management plans and the establishment of the organizational frames.

ACT LXXVII OF 2011 ON WORLD HERITAGE

“Section 7. (1) In order to preserve the outstanding universal value as well as all material and non-material attributes carrying it, the management of World Heritage areas covers the use, the development and presentation and, if necessary, restoration of World Heritage areas, furthermore, the harmonisation of activities concerning the preservation of World Heritage areas and of activities concerning their sustainable use.”

ACT LXIV OF 2001 ON THE PROTECTION OF CULTURAL HERITAGE,

Act LXIV of 2001 on the Protection of Cultural Heritage (in particular, Sections 28/A., 39., 41., 43.) declared the maintenance, protection, use and display of areas of historical significance belonging to architectural heritage – in particular, those areas appearing in the World Heritage Register – as being of public interest.

ACT LXIV OF 2001 ON THE PROTECTION OF CULTURAL HERITAGE

Section 28/A. (1) “Registered monuments shall be given general protection by virtue of this Act.”

HISTORICAL AREAS

Section 39. (1) “As an area of historic significance, protection shall be granted to the part of the municipality, the characteristic structure, manner of construction, overall appearance, links to the nature, squares and streets or group of buildings which add up to a coherent system that is of historic value and therefore deserves historic monument protection.”

MAINTENANCE OF PROTECTED HISTORIC MONUMENTS

Section 41. (1) “The management and maintenance in proper condition of registered monuments and historic monuments shall be provided for by the owner, asset manager, user thereof; for historic monuments within the scope of high-priority national assets it shall be provided for by the asset manager, user, beneficiary of property rights, or the courtesy user (hereinafter collectively referred to as owner) as defined by Act XXXIII of 1991 on the Transfer of Certain Asset Items Owned by the State to Municipalities (hereinafter: Act), in accordance with the provisions of the Built Environment Act and this Act.”

APPROPRIATE USE AND RESTORATION OF PROTECTED HISTORIC MONUMENTS

*Section 43. (2) “As regards the utilization of historic monuments of outstanding importance for the national economy, use relating to universal or national culture or serving public purposes shall have priority...
(4) In the use of the registered historic monument, sustainable use that does not endanger the monument shall be aimed at.”*

ACT LXXVIII OF 1997 ON THE FORMATION AND PROTECTION OF THE BUILT ENVIRONMENT,

Act LXXVIII of 1997 on the Formation and Protection of the Built Environment (in particular, Sections 7., 13., 31., 56.) declared the maintenance, protection, use and display of areas of historical significance belonging to architectural heritage – in particular, those areas appearing in the World Heritage Register – as being of public interest.

ACT LXXVIII OF 1997 ON THE FORMATION AND PROTECTION OF THE BUILT ENVIRONMENT

Section 7. (1) “The objective of urban development and urban planning is to outline a settlement pattern to promote sustainable development and a quality environment ...[...]...”

c) the need for enhancing the identity of the local population, preserving the diversity and complexity of their cultural heritage ...[...]

h) the protection, renovation or further improvement of historically or visually important town districts and of the architectural and archaeological heritage worthy of preservation, and the preservation of the view (overview) of valuable structures and landscapes and the panorama afforded by the properties, to an extent as not to impede developments on the lots concerned within statutory provisions...[...]

*Section 13. (2) "As regards the construction activities specified in Subsection (1) of Section 33/A, of the provisions of the local building code, the following shall apply...[...]
c) regulations on protection as national or local architectural heritage, - in the absence of townscape ordinance - on townscape preservation, provisions on the protection of national treasures possessing archaeological value, on landscape and nature conservancy, and requirements relating to areas at risk, protection against natural disasters and disaster management, safety zones and clearance."*

Section 31. (5) "In the process of siting and positioning a building, and also in connection with its design, remodelling, expansion, renovation, rehabilitation where the building's exterior is concerned special attention must be afforded for the protection of townscape, landscape, development and architectural attributes and landmarks, preservation of unique local features, and for the protection of architectural heritage and architectural values."

Section 56. (1) "Architectural heritage includes historical monuments, historical environments and areas and cultural landscapes of historical significance. Adequate maintenance and protection of architectural heritage is of public interest.

(2) Elements of architectural heritage of special importance are to be designated (placed under protection), maintained, preserved, used and displayed as a part of international (universal), national and local architectural heritage.

(3) The outstanding and universal elements of international architectural heritage, registered in the 'World Heritage Register', are to be maintained, preserved, used and displayed in accordance with the relevant international treaties as well."

In conclusion, it can be established that the "area of historical significance" including the World Heritage area in the Hungarian legal system is regulated in detail, from the general spirit expressed in the Constitution, through national and local (urban) building regulations and the procedural activities of authorities, to provisions pertaining to the requirements of implementation and operation.

Preparations for the creation of the organizational and financial conditions necessary to draft the "World Heritage management plan" pursuant to Act LXXVII of 2011 on World Heritage are currently ongoing. During the transitional period, regulations pertaining to "areas of historical significance" are effective for World Heritage areas, too. The classification of "area of historical significance" does not substitute the "World Heritage management plan" serving the protection of outstanding universal

values, but it allows – until its entry into force – for ***outstanding universal values of areas not to be damaged***, and at the same time sustainable, integrated development of the area to be continued.

In the area examined, since the 41st COM of the UNESCO World Heritage Committee in Cracow in 12. July 2017, new building permit of the planned buildings has not been issued (31 January 2018).

OBJECTIVE OF THE EXAMINATION

The examination of the impact produced upon the *outstanding universal value* of the World Heritage site by the “Liget Budapest Project” (in decision number 37 COM 7B.76: the “Museum Park” which title and the program has changed) development and the evaluation of this impact, along with the formulation of recommendations in connection with this.

FINDINGS OF THE EXAMINATION

The elements of the planned Liget Budapest Project will have numerous effects on the examined World Heritage site and its buffer zone (together: the World Heritage site according to Act LXXII of 2011 on the World Heritage). The majority of these effects are positive or neutral, but there will be some negative impact. The negative consequences can be counterbalanced or abrogated through careful planning and proper maintenance.

CONCLUSIONS AND RECOMMENDATIONS FOR THE REDUCTION OF UNFAVORABLE IMPACT

The unfavorable effects can be mitigated or counterbalanced through cautious and careful planning, implementation, management and operation. The weighing of the favorable and unfavorable effects that have come to light presumes that the changes (supplemental developments, investments, measures, etc.) appearing in the designs – sometimes to be implemented outside the area examined – will be implemented during the course of the interventions.

In the Building Regulations, areas of the built in area of the City Park are characteristically comprised of areas that are currently built in or paved, and contribute to the increase in **green areas from 60 to 65%**. The permitted increase in areas that have construction on them can be considered neutral from the aspect of the World Heritage site, because the closest new building will be about 320 meters from the center of the Heroes’ Square ensemble with a height of 22 meters above the ground, the

Millennium Memorial's decorated central column supporting the statue of the Archangel Gabriel with a height of 36 meters above the ground. The increase in construction in the park could have a negative impact on the World Heritage buffer zone, but the City Park Building Regulations have made provisions for the maximum permitted amount of construction 7%. The new buildings are being located on previously built in areas and on sites of existing paved surfaces and according to the final plan the built area is much lower than the permitted (less than 6,6 %).

The **Museum of Ethnography** (design: Napur Architect Kft.) will be closest to the World Heritage site. The design was a favorable proposition because it suggests the realization of the museum building established as a unified structure under ground level using currently paved surfaces and set within greenery, giving the impression of freestanding buildings.

The House of Hungarian Music (design: Sou Fujimoto Architects) is a transparent building on the site of the former HUNGEXPO buildings, with its height remaining under the canopy of the existing trees. The building will be about 440 meters from the centre of the Heroes' Square ensemble.

The **New National Gallery** (design: Sejima and Nishizawa and Associates (SANAA)) would be established on the site of the former Petőfi Hall (1986), which was built on the place of the Hall of Industry (1885).

The **Városliget Theater** (design: Narmer Bt.) is a reconstruction of the former Theatre on a currently paved surface.

The **Biodome** (design: Mérték Studio Kft.) is located in the area of the former Amusement Park.

The increase in visitors to the City Park could lead to an increasing burden. This impact affects but does not endanger the World Heritage site or its buffer zone. On the basis of the analysis of park utilization habits it can be established that the burden on the City Park is not homogeneous, certain areas have far more visitors than other sections of the park. In accordance with this, one of the important tasks of the City Park's garden and landscape architectural plans is the proper spatial distribution of functions. Further measures are needed for the proper level of park maintenance. Through these measures the burden can be differentially organized in space and the unfavorable effects can be counterbalanced.



Figure 1 | Aerial photograph of the City Park (2013)

(source: Városliget Zrt.)

In conclusion, it can be established that the planned interventions will typically have a positive impact on the World Heritage site (reduction in traffic, balancing of burdens, etc.) and the direct or indirect negative effects are defined in the accepted plans and can be counterbalanced through the supplemental investments that are a part of the project.

1. INTRODUCTION

1.1. OBJECTIVE OF THE WORLD HERITAGE IMPACT ASSESSMENT

The objective of this study is to satisfy decision number 37 COM 7B.76 of the UNESCO World Heritage Committee made at its 37th meeting in relation to the *Budapest – The Banks of the Danube, the Buda Castle Quarter and Andrásy Avenue* site. Within the context of this, the study will take into consideration and assess the impact produced upon the *outstanding universal value* of the World Heritage site by the “Liget Budapest Project” development.

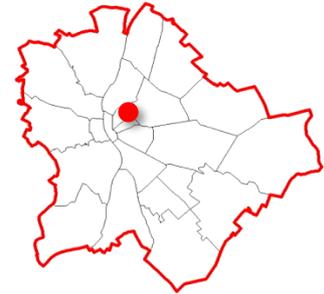


Figure 2 | Budapest and the area examined

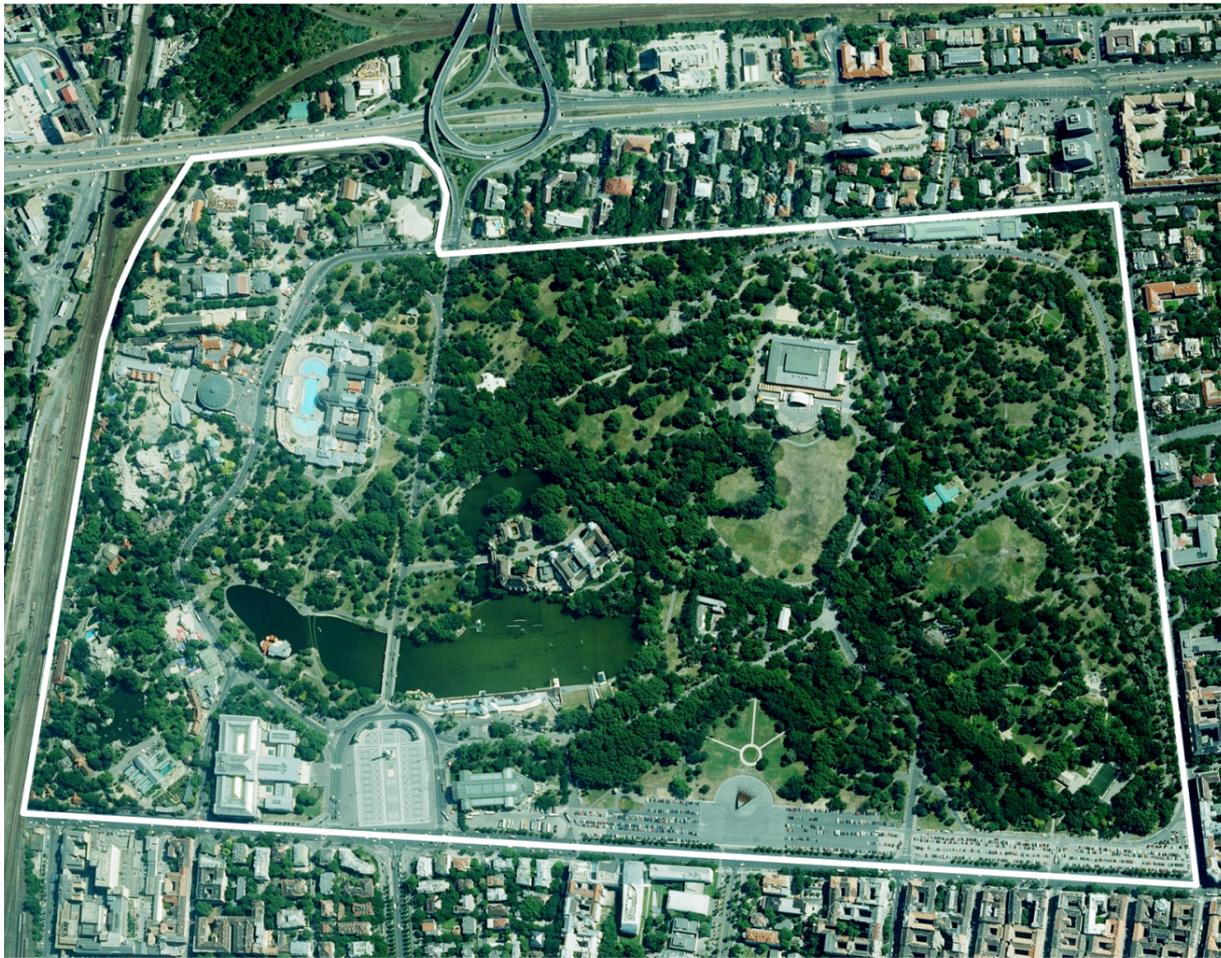


Figure 3 | Demarcation of the intervention area: the City Park (source: Városliget Zrt. | FŐMI)

1.2. IDENTIFICATION OF THE INTERVENTION AREA

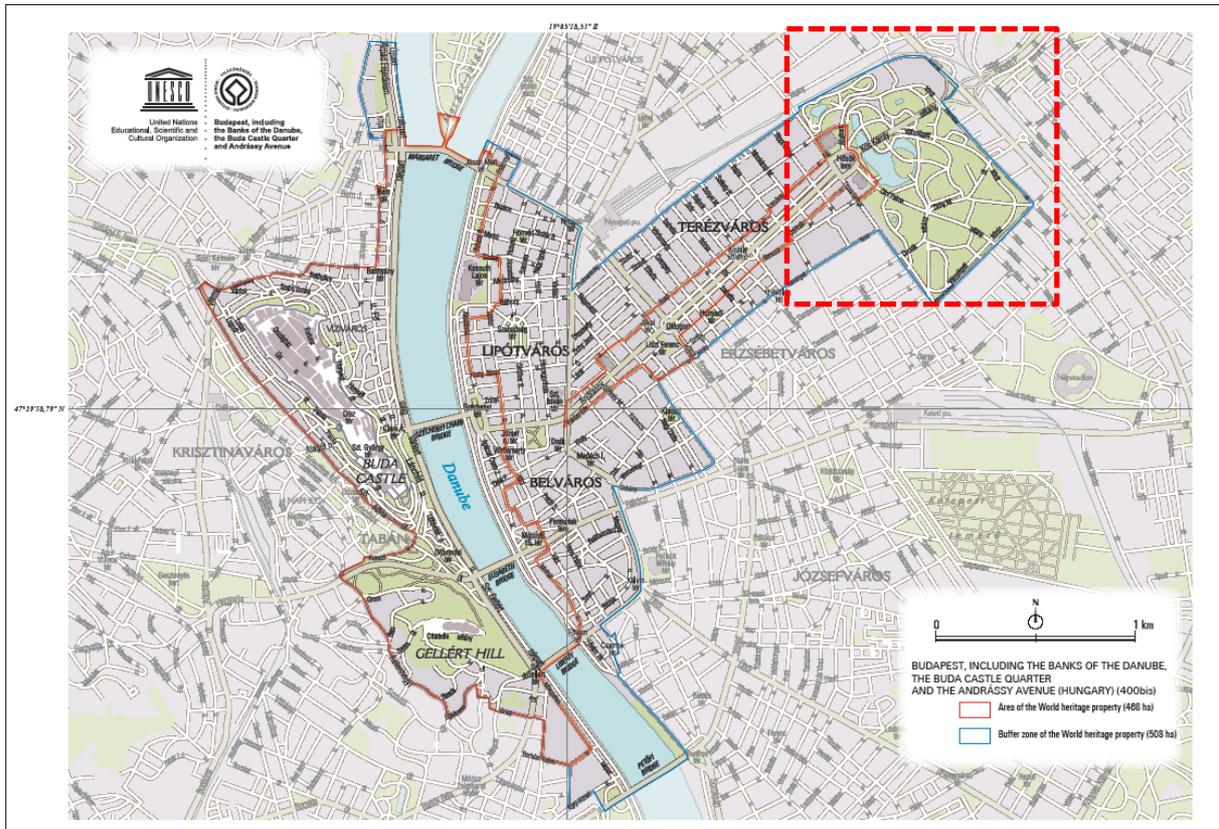


Figure 4 | The Budapest World Heritage site with the demarcation of the area examined (source: Forster Center)

The area affected by the intervention is the eastern section of the “Budapest – The Banks of the Danube, the Buda Castle Quarter and Andrassy Avenue” site (the Heroes’ Square ensemble) and the City Park, a part of the buffer zone.

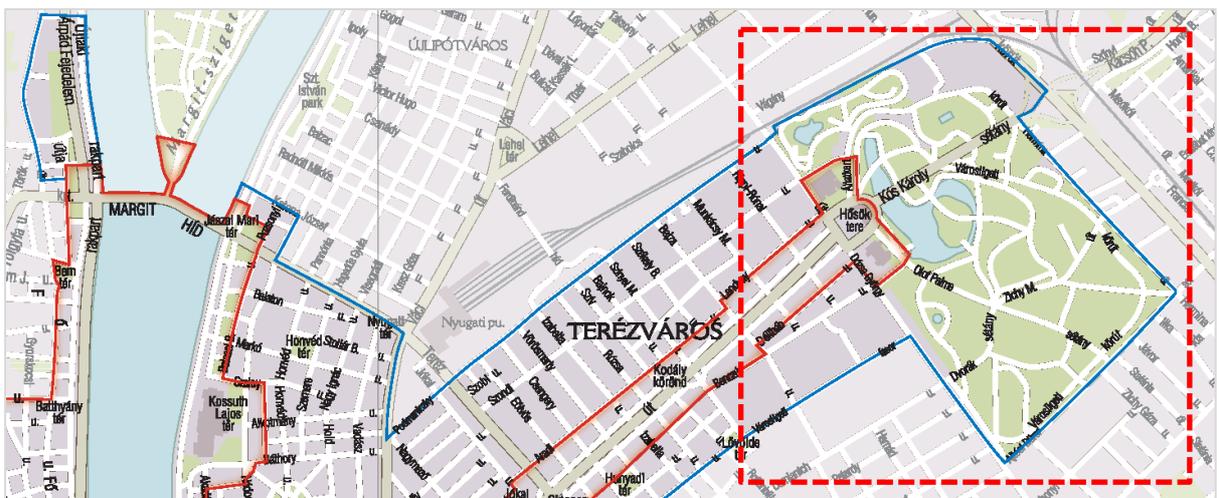


Figure 5 | The Budapest World Heritage site with the demarcation of the area examined (detail) (source: Forster Center)

1.3. TOPOGRAPHICAL DEMARCATION OF THE INTERVENTION AREA

The intervention area of the territory of the City Park with the section affected by the intervention

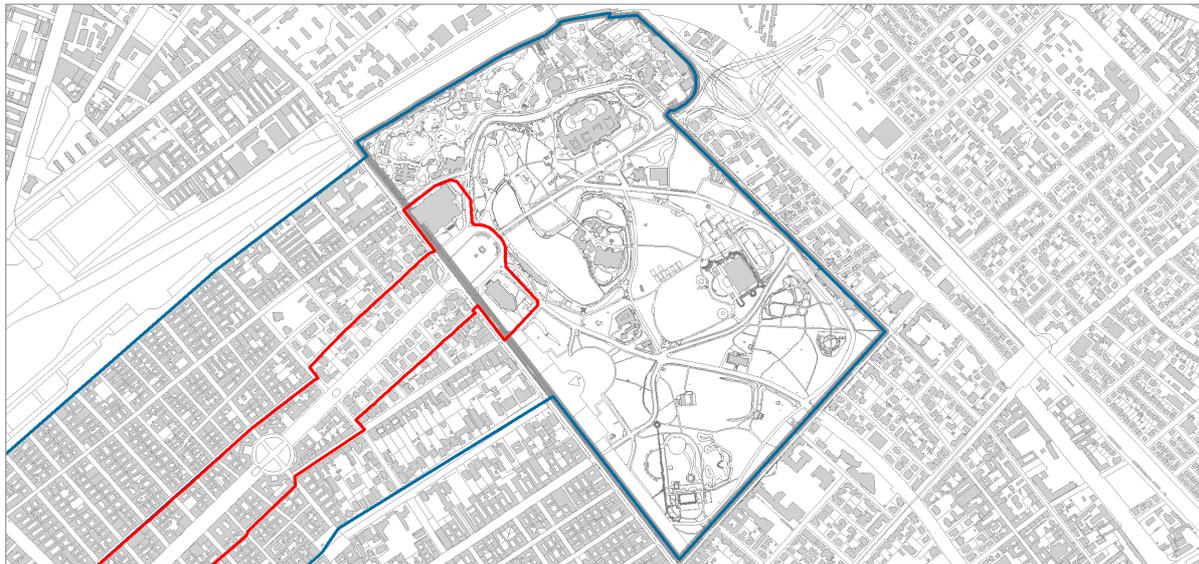


Figure 6 | The intervention area (thick gray line), the World Heritage site (red line) and the buffer zone (blue line)

The boundaries of the area examined: Budapest, 14th District: the axis of Dózsa György Road – the northwestern lot boundary of the Zoo – the Varannó Street lot boundary of the Amusement Park to Hermina Road – the boundary of Hermina Road on the City Park side – the boundary of Ajtósi Dürer Lane on the City Park side – the axis of Dózsa György Road (d.b.)².

The size of the area: c. 120 hectares.

The museum buildings designed during the course of the planned “Liget Budapest Project” (in decision number 37 COM 7B.76: the “Museum Park”) development have been designed for the territory of the City Park, which comprises a portion of the World Heritage buffer zone. The area examined is divided into several sections from the aspect of evaluation. The Heroes’ Square ensemble that comprises a portion of the World Heritage site is surrounded by the City Park that comprises a part of the buffer zone. This space and group of buildings constructed on a former section of the City Park, today’s Heroes’ Square – including the memorial – presently can be defined as a section of built heritage on the site, which is interpreted as the historically developed park.

Character of the area	Location of the area affected by the intervention	
	World Heritage site	buffer zone
built heritage, historic properties	+	+
green area of a historic park	-	+

Table 1

² Note: in several cases the axes of the streets are district borders, which is indicated by the notation (d.b.). In these cases the border of the Heritage site is the district border in the land registry and not the geometrical axis of the road.

2. SUMMARY OF METHODOLOGY

The evaluation has primarily been prepared on the basis of the ICOMOS International guide of 2011³ (*Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*).

During the development of the evaluation the following documents were employed:

- World Heritage impact assessment (Forster Center, 2015)
- Supplement to the World Heritage impact assessment (Visibility Study, Városliget Zrt., 2016)
- provisions of the laws related to the area of intervention;
- documentation composed on the area of intervention, in particular the scientific examinations and impact assessments on the area;
- Act CCXLII of 2013 on the Renovation and Development of the City Park;
- The City Park Building Regulations 32/2014, and expertise (Budapest Metropolitan Council, 30 June 2014); and
- The modified City Park Building Regulations 20/2016 (Budapest Metropolitan Council, 10 June 2016).

During the evaluation, the findings from the professional documentation with an interdisciplinary approach, which summarized the statements of the examinations by experts in various fields, were utilized.

During the course of the planning of the “Liget Budapest Project” heritage, urban planning, environmental, geodesic, park use, tourism, economic and transportation development impact statements were prepared:

- The Impact on the National Economy of the Liget Budapest Project, as an Investment in Culture and Tourism / KPMG, Budapest, 2014.
- Examination of the Applicability of Green Assessment Systems at Citywide and Building Scales in the Case of the Liget Budapest Project / PPR PLAN Kft., Budapest, 2014.
- Park Use Survey for the City Park / Budapest Corvinus University Garden and Open Space Planning Department in cooperation with the Ormos Imre Foundation, Budapest, 2014.

and

- The Expertise for the City Park Building Regulations /BFVT Kft., Budapest, 2014. (working sections from professional fields in accordance with the laws)

³ Guidance on Heritage Impact Assessments for Cultural World Heritage Properties
A publication of the International Council on Monuments and Sites / January 2011

THE PROCESS OF EVALUATION

The impact evaluation mechanism follows the evaluation process. In accordance with this, the description of the area of intervention and an introduction to the attributes of the World Heritage site’s outstanding universal value is followed by a presentation of the interventions. The next step is the understanding and classification of the effects on the attributes that bear the impact from the aspect of these attributes. Finally, a summary of the recommendations necessary for reducing unfavorable impact follows.

The process is as follows:

ASSETS:	SECTIONS 3-4	the outstanding universal value of the World Heritage site (criteria II and IV)
DESCRIPTION OF THE AREA:	SECTION 5	the area affected by the intervention and a description of the history of the area
ATTRIBUTES:	SECTION 6	the attributes of outstanding universal value
INTERVENTIONS:	SECTION 7	planned developments in the intervention area (City Park)
EVALUATION OF THE IMPACT OF THE INTERVENTIONS:	SECTION 8	the impact of the planned developments on the impact bearing attributes that embody the outstanding universal value
RECOMMENDATIONS NECESSARY FOR THE REDUCTION OF IMPACT:	SECTION 9	summary of the reduction of negative impact and the recommendations necessary for this reduction

3. RETROSPECTIVE STATEMENT OF OUTSTANDING UNIVERSAL VALUE FOR THE WORLD HERITAGE SITE⁴

State Party: *Hungary*

Ref.: *400bis*

Date of Inscription: *1987*, Date of Extension: *2002*

THE CRITERIA FOR SELECTION

“To be included on the World Heritage List, sites must be of outstanding universal value and meet at least one out of ten selection criteria.

These criteria are explained in the Operational Guidelines for the Implementation of the World Heritage Convention which, besides the text of the Convention, is the main working tool on World Heritage. The criteria are regularly revised by the Committee to reflect the evolution of the World Heritage concept itself”

The State Party has submitted the application on the basis of Criteria (II) and Criteria (IV).

BRIEF SYNTHESIS

This stretch of the Danube has been the location of human settlement since the Palaeolithic. It was the site of the Roman city of Aquincum, situated to the north of the inscribed property which comprises parts of two originally quite separate cities: Buda on the spur on the right bank and Pest on the plain on the left bank. Pest was the first medieval urban centre, devastated in 1241-2. A few years later the castle of Buda was built on a rocky spur on the right bank by King Bela IV. Thereafter, the city reflected the history of the Hungarian monarchy. After the end of the Turkish occupation, recovery did not really begin until the 18th century. In the 19th century, the city's role as a capital was enhanced by the foundation of the Hungarian Academy, housed from 1862 in a neo-renaissance palace, and by the construction of the imposing neo-gothic Parliament building (1884–1904). W.T. Clark's suspension bridge, finalised in 1849, symbolised the reunification of Buda and Pest, which did not actually come about until 1873. The symbol of the development of the city as a modern metropolis was the radial Andrassy Avenue, which was included in the property in 2002. From 1872, the Avenue radically transformed the urban structure of Pest, together with the construction of the European continent's first underground railway beneath it in 1893-6.

⁴ Adopted at the 38th meeting of the World Heritage Committee, see decision number.

As a centre for receiving and disseminating cultural influences, Budapest is an outstanding example of urban development in Central Europe, characterised by periods of devastation and revitalisation. Budapest has retained the separate structural characteristics of the former cities of Pest, Buda and Óbuda. One example thereof is the Buda Castle Quarter with its medieval and characteristically Baroque style, which are distinct from the extended and uniquely homogeneous architecture of Pest (with its historicising and art nouveau styles) which is characterised by outstanding public buildings and fitted into the ringed-radial city structure. All this is organized into a unity arising from the varied morphological characteristics of the landscape and the Danube, the two banks of which are linked by a number of bridges.

The urban architectural ensemble of the Andrásy Avenue ('The Avenue') and its surroundings (Heroes' Square, the City Park, historic inner-city districts and public buildings) are high-quality architectural and artistic realisations of principles of urbanism reflecting tendencies, which became widespread in the second part of the 19th century. The scenic view of the banks of the Danube as part of the historic urban landscape is a unique example of the harmonious interaction between human society and a natural environment characterised by varied morphological conditions (Gellért Hill with the Citadel and the Buda Hills partly covered with forests, the broad Danube river with its islands and Pest's flat terrain rising with a slight gradient).

CRITERIA (II)

Aquincum played an essential role in the diffusion of Roman architectural forms in Pannonia, then in Dacia. Buda Castle played an essential role in the diffusion of Gothic art in the Magyar region from the 14th century. In the reign of Matthias Corvinus, Buda was an artistic centre comparable, due to its influence, to that of Cracow. As a result of the unification of Pest, Buda and Óbuda in 1872-73, Budapest became once more a significant centre in the second part of the 19th and at the beginning of the 20th century due to the amount and quality of heritage built during those periods. It was a centre which absorbed, integrated and disseminated outstanding and progressive European influences of urbanism and of architecture as well as modern technological developments such as the Millennium Underground Railway, built under Andrásy Avenue, the first in Continental Europe, all of which was in line with its role as a metropolis.

CRITERIA (IV)

Buda Castle is an architectural ensemble which, together with the nearby old district (the Buda Castle Quarter) illustrates two significant periods of history which were separated by an interval corresponding to the Turkish invasion. The Parliament is also an outstanding example of a great official building on a par with those of London, Munich, Vienna and Athens, exemplifying the eclectic architecture of the 19th century, whilst at the same time symbolising the political function of the second capital of the Austro-Hungarian Empire. Andrassy Avenue (1872–1885) and the Millennium Underground Railway (1893 – 1896) are representative examples of the implementation of planning solutions associated with the latest technical facilities of the day to meet the requirements of an emerging modern society. Architecturally, the Avenue has great integrity in its eclectic, neo-renaissance buildings.

INTEGRITY

The delimitation of the extended property meets the requirements of integrity since it includes the attributes of Outstanding Universal Value and their historical and structural role is preserved in the urban fabric. Despite the ruinous or missing buildings in certain parts and especially in the Buda Castle Quarter, and despite the reconstructions within the panorama of the Danube banks following World War II, the overall integrity of the property is sustained. In order to reinforce integrity, it is justified to review the delimitation on the Buda side as well as the inclusion of Margaret Island and the extension of the protected area up to the Grand Boulevard (Nagykörút). The original form of Andrassy Avenue with its buildings has been preserved reasonably well in terms of its conception and its relation to the surrounding urban environment, as well as the building fabric. Attention is also given to the preservation and appropriate design of small elements that form part of the street furniture. There are some problems, for example, in the physical condition of the buildings: wooden roof structures have suffered from humidity and metal structures have corroded, requiring maintenance and repair. There have also been some changes in the occupation, offices tending to replace the earlier residential use, which is a common problem in central urban areas. There have been problems with regard to development in the setting of the World Heritage property, both in terms of demolition and inappropriate new structures. Other challenges are the insurance of heritage-friendly traffic management and the mitigation of climate change impact on the natural and built environment (for example extreme water-levels of the Danube, air-pollution and deterioration of limestone structures).

AUTHENTICITY

In its attributes and the sum of its constituent parts, the property preserves the defining characters of the architectural heritage created by consecutive layers of historical periods. The restoration and partial reconstruction of the Buda Castle Quarter after World War II, carried out mainly between 1960 and 1980, as well as the degree of authenticity of the surviving historicising buildings are in line with the requirements of the Operational Guidelines. The majority of the replaced buildings in the panorama of the Danube banks conform to their original scales. The big public buildings, such as the Parliament, the Opera House, the Hungarian Academy of Sciences and the Market Hall, have also retained their original functions. Three of the four bridges across the Danube situated in the property have been authentically renovated. The 20th century design of the new Elisabeth Bridge fits in well into the line of bridges preserving its authentic image. Andrásy Avenue, with its trees alongside and its environment, preserve its historicity in its conception and constituent parts. The majority of public buildings have preserved their original function, however, the transformation of residential buildings into offices is an unfavourable trend.

The renovated Underground Railway plays a functional role in the city infrastructure. The stations under the Avenue have retained their original features, while those in the City Park have been changed from their original position above-ground and are now built under the surface which represents a certain degree of compromise with regard to the authenticity of the railway. One of the guarantees of the property's authenticity lies in the authentic conservation of the historic urban structure and the buildings in the buffer zone.

PROTECTION AND MANAGEMENT REQUIREMENTS

The World Heritage property with its buffer zone has been legally protected as a historic monuments area since 1965; this protected area was enlarged in 2005 - after the extension of the property in 2002 – under the Act on the Protection of Cultural Heritage. A great number of historic buildings as well as the bridges and the embankments are also individually protected. The proposed revision of the boundaries of the property is prompted not only by decisions of the World Heritage Committee, but also by recent evolution in the appreciation of the heritage values of the property and its surroundings, as well as by the appearance of new threats. The property and its buffer zone lie within nine administrative districts of Budapest, another municipality being that of the Capital of Budapest itself. These ten municipalities concerned have not yet established an overall management body.

Architectural Planning Juries, both at the level of the districts and at the level of the Capital of Budapest, facilitate high quality architectural developments in accordance with the values of the property. The Gyula Forster National Centre for Cultural Heritage Management was the World Heritage

Management Body, currently it works under the Department of the Prime Minister. Based on the national World Heritage Act of 2011, the state of conservation of the property, as well as threats and preservation measures will be regularly monitored and reported to the National Assembly, while the management plan will be reviewed at least every seven years. Once finalised and approved, the management plan and the management body provide transparent governance arrangements with clear responsibilities, where different interests can manifest themselves and where the institutional framework and methods for the cooperation of the different stakeholders are available.

A management requirement is the establishment of an urban conservation and development plan for the buffer zone, fully respecting the principal architectural and urban values of each quarter with a strict enforcement. In a complementary manner, additional funding (for example tax incentives and grants) has to be sought, and in a dynamic manner, private building investment has to be directed to rehabilitation operations and restoration rather than demolition and reconstruction. Due to the complexity of the property and its context, special attention has to be paid to developing appropriate monitoring tools and mechanisms as well as to their proper application.

4. RELATIONSHIP OF THE INTERVENTION AREA TO THE WORLD HERITAGE SITE'S OUTSTANDING UNIVERSAL VALUE

A significant majority of the planned interventions are being implemented in the buffer zone of the World Heritage site, the area of the City Park outside of Heroes' Square. The City Park itself became a part of the site's buffer zone through the site's extension in 2002, and as a part of the combined area of the World Heritage site and the buffer zone received (national level) historic district protection in 2005 (National Cultural Heritage Ministry Decree 7/2005. (III. 1.) on the Registration of the Budapest and Pannonhalma World Heritage Sites as Historic Districts). Several individually registered historic properties can also be found in the City Park (see: the area's historic description in Section 5). According to paragraph 104 of the World Heritage Convention's Operational Guidelines "For the purposes of effective protection of the nominated property, a buffer zone is an area surrounding the nominated property which has complementary legal and/or customary restrictions placed on its use and development to give an added layer of protection to the property.

This should include the immediate setting of the nominated property, important views and other areas or attributes that are functionally important as a support to the property and its protection." In the present case the City Park as a part of the buffer zone:

- includes the important eastern and northeastern view of the axis of Andrassy Avenue and the view from Andrassy Avenue and Heroes' Square in this direction, as well as to the east and southeast to a certain extent – and thereby a significant element of its role as a buffer is ensuring the maintenance of the authenticity of the view (both its internal and external aspects);
- contributes to a significant degree to the functional integrity of Andrassy Avenue by preserving the original urban design function of the Avenue: The Avenue leads out from the Downtown to the historic park surrounding Heroes' Square – the green area providing relaxation, recreation and cultural facilities (its name during the Reform Era in the mid 18th century was the City Woods). It thereby contributes to the historic integrity of Andrassy Avenue as an urban design unit, providing context to the Avenue.
- considering its own value, is an outstandingly significant complex functional unit primarily providing an area for the inhabitants of the city in a green environment. At the same time, it also contains – in a manner that has developed over time – cultural, health maintenance and recreational institutions and opportunities. As part of the buffer zone it even serves to reduce in part the burden of tourism uses on the World Heritage site, to a certain extent drawing off the tourist burden, absorbing a portion from the site.

5. DESCRIPTION OF THE AREA OF INTERVENTION

5.1. GENERAL INTRODUCTION TO THE CITY PARK

The area of intervention is the City Park itself, which is divided into two sections:

1. the building ensemble of Heroes' Square, which comprises a section of the World Heritage site, and
2. the City Park that is the buffer zone for the World Heritage site.

Under Hungarian legal regulations, the two areas are regulated identically, as a Historic Monuments Area (MJT). The City Park was one of the world's first public "People's Gardens" (1816), whose rich history is closely related to the history of Budapest. The City Park is an urban public park, and the cultural, recreational and entertainment functions (museums, medicinal baths, circus, zoo and botanical gardens, etc.) it contains are an integral part of it.

5.2. TRANSPORTATION LINKS TO THE CITY PARK⁵

In addition to the construction of museums, the renovation of the park and the related institutional development, a pillar of the planned developments of the Liget Budapest Project ("City Park") (see also: Section 7) is the reorganization of transportation. Presently the transit traffic feeding into the M3 expressway that burdens Kós Károly Promenade and the traffic on Dózsa György Road affect the World Heritage site. The surroundings of the World Heritage site are also presently burdened by P+R parking lots.

In the following we quote the transportation conditions assessment working section supporting the City Park Building Regulations, because this documentation elaborated in detail the present conditions of the entire area:

"...The nearly 100 hectare park and 20 hectare additional area examined counts as one of Budapest's most frequented locations from the point of view of transportation. Public roads, urban public transportation and railway lines all border or cross the area as significant elements of their networks. The key elements of the network of public roads in the area examined are Hungária Boulevard and Dózsa György Road, which provide transverse links, and the traffic route made up of Kós Károly Promenade and Andrassy Avenue that leads up to the M3 expressway feeder in a radial direction. As a part of the Hungária Ring (Róbert Károly Boulevard-Hungária Boulevard-Könyves Kálmán Boulevard), Hungária Boulevard on the outer edge of the City Park is the most important element of the network of public roads, providing direct links to the Buda side over the Árpád Bridge in the northern Pest area and the Rákóczi Bridge in the southern Pest area.

5 Working section supporting the City Park Building Regulations (source: www.budapest.hu / 03_1_Alatamaszto.pdf)

In its section through Pest this road provides traffic links to all of the capital's crucial main radial roads, many of which function as the feeders in Budapest to the network of national highways – routes 2, M3, 3, 31, 4, M5 and 5. The Hungária Ring is even named a 2x3 (in places 2x4) lane 1st class main road in the National Regional Development Plan.”

“Dózsa György Road on the downtown side of the City Park – together with Dráva Street that connects directly to it as well as Fiumei Road and Haller Street that connect indirectly with it through Baross Square – is also important, but due to the fact that it does not connect to any bridges over the Danube it is a route that only provides Pest-side links.

Dózsa György Road, which was renovated in 2002 is a 2x3 lane road through the area examined and is a 2nd class main road with a central park strip for most of its length.

Kós Károly Promenade, which cuts through the City Park, has significance to the network of public roads on the one hand through its link to Andrassy Avenue, which was built in the Hungarian Millennium period (1896) to provide a connection to the downtown, and on the other hand as the feeder road to the M3 expressway opened in the 1970s as part of the national highway network.

Kós Károly Promenade spontaneously becoming an element of the network of main roads is shown by the fact that it is not an independent construction area (lot), but even to this day comprises a part of the City Park from a property rights standpoint. Kós Károly Promenade is a 2x1 lane 2nd class main road. The network of public road railways (trams) are key elements of urban public transportation in the area examined. Tram line 1, which in its northern section provides a link to Óbuda over the Árpád Bridge, was constructed on the Hungária Ring during the final decades of the last century. Its southern section is still being constructed and will provide a link to Újbuda over the Rákóczi Bridge. In its final form the full length of the line will reach 18 km.

The Millennium Underground Railway (since 1896), which runs through the territory of the City Park, provides a subway-type connection between the downtown of Pest and Zugló due to its construction below the surface. A direct, commuter-friendly transfer link between the ring-like route of tram line 1 and the radial direction of the Millennium Underground has not been created.

The area examined, or rather the areas to its north and east, are bordered by railway areas. Links between the capital and northern Hungary are provided by railway lines running into Nyugati Station from Vác (the first Hungarian railway line), Veresegyháza and Esztergom and the line from Cegléd provides a link to a portion of eastern Hungary. Due to the lack of a railway station in the area examined, the presence of these railway lines does not directly provide the benefits of a system of network links...”

5.3. DESCRIPTION OF THE CITY PARK'S ARCHITECTURAL AND LANDSCAPE ARCHITECTURAL HISTORY

5.3.1. BACKGROUND

The reconstruction of Pest after it was freed from Ottoman occupation in 1686 began slowly and only gained momentum from the 1710s. At the end of the century Pest became a regional center with 20,000 inhabitants, a big city for that time, primarily due to commerce. The number of visitors arriving for the four annual national fairs reached as many as thirty thousand people. Churches were built in the middle of the century. The main roads leading out in different directions of the compass from the three gates of the walled city led to Vác, Hatvan and Kecskemét. The pontoon bridge near the Vác Gate provided a connection to Buda. The spread of the city beyond the town wall began in the area of this bridgehead following the demolition of the gate in the 1790s. An elegant urban district, Lipótváros, was erected in a few decades between the Danube and the main road to Vác (today's Bajcsy-Zsilinszky Road). On the opposite side of the main road, where later the Terézváros district would be located, the citizens of Pest cultivated gardens in the 18th century. The commercial road branching off from the pontoon bridge, the present-day Deák Ferenc Street, then continued on through the gardens to the northeast (present-day Király Street), with its path leading to the area of the City Park.



Figure 7 | Survey of the park area by H. Nebbien from 1816
(Galavics, Géza: Magyarországi angolkeretek. Budapest, 1999. p. 88.)

5.3.2. FIRST STEPS IN THE FORMATION OF THE CITY PARK

Trees were planted several times in this sandy area starting in 1755. In 1799, the Archbishop of Esztergom, József Batthyány, leased the area from the city and began to have it arranged under the direction of the engineer Rudolf Witsch. In conjunction with this the city council of Pest planted a row of trees along the extension of Király Street. This is now Városligeti (City Park) Avenue, and along this road lots for summer homes were parceled out. Following the death of the archbishop, in 1805 the city reacquired the area. At this time Archduke Joseph Habsburg, Palatine of Hungary created the Beautification Commission for the city of Pest, through which he strove to make it a European-level provincial seat. The Commission announced a competition in 1813 for the organization of the City Park with the goal of “creating a useful and pleasant place of entertainment for all classes of the city”.

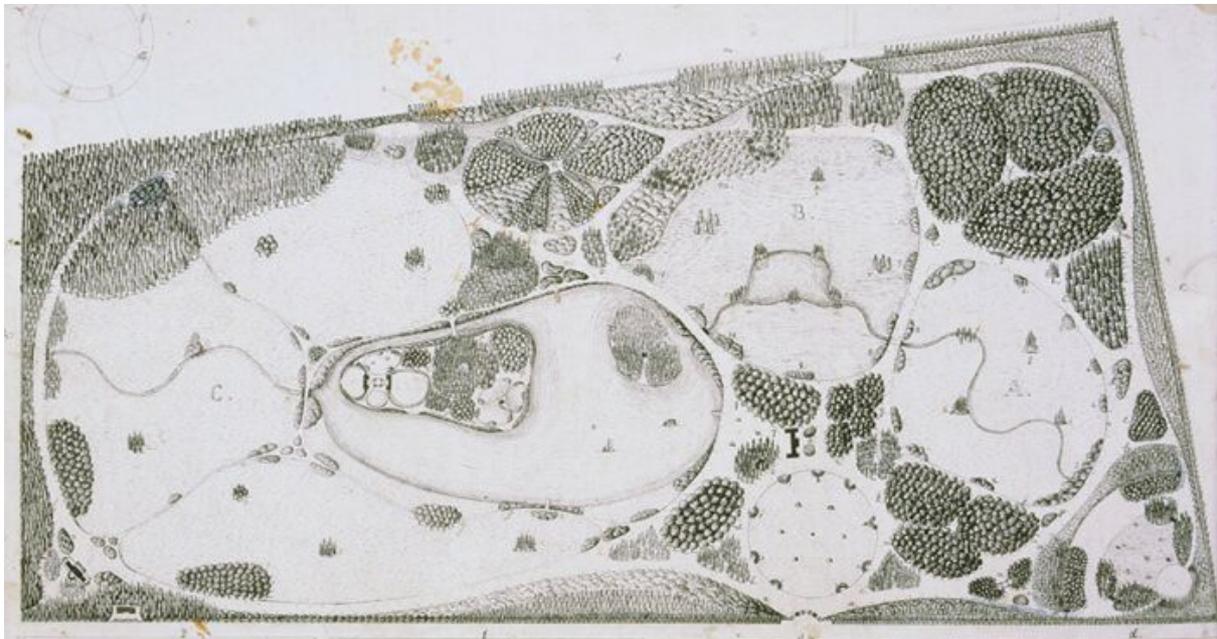


Figure 8 | H. Nebbien’s plan from 1816
(Galavics, Géza: *Magyarországi angolkertek*. Budapest, 1999. 89.)

5.3.3. NEBBIEN’S WORK⁶

The designer of the gardens, *Christian Heinrich Nebbien* (1778-1841), was a horticulturist of German origins – or as he described himself an economic counselor (Ökonomierat). In the heart of Europe, in Hungary, in the city of Pest, he was able to be the *first to create* a genuine, large “*public garden*”- an open space intended for the citizens of the city, in modern-day parlance a recreational park that had no precedent in western civilization.

⁶ Utilizing Galavics, Géza: *Magyarországi angolkertek*. Budapest, 1999, p. 88-90.

There had previously been a few public parks created in the major cities of Europe, but those as a general rule were not established in this manner (as the property of the citizenry and through their financing), but instead were typically aristocratic or ecclesiastical ornamental gardens that were transformed for this purpose. Furthermore, Nebbien obtained this work through a *design competition* with a well thought out, high quality concept. However, due to problems with financing he was not able to fully realize his ideal design of landscape architecture entitled “*Ungarn Folks-Garten der Koeniglichen Frey-Stadt Pesth*” (Public Garden of Hungary in the Free Royal City of Pesth) for this some 1.2 km² marshy area unfit for construction or cultivation, once called “Oxfield”, then later the “New City Woods” after being planted with trees. Still, he skillfully streamlined the “designer’s financial specifications” so that the large scale scenic park he imagined with many garden structures and monuments and a huge lake with two islands was constructed relatively quickly. It is proof of Nebbien’s wide-ranging engineering knowledge – encompassing geology, soil science, geodesy, hydrology, dendrology and “landscape beautification” – that by 1845 the citizens of Pest looking for relaxation could stroll through this park with rich vegetation.



Figure 9 | Colored Erhárd map from 1836
(Budapest City Archives, Old Maps of Budapest, Arcanum database)

Nebbien strove for utility and diversity in his use of plants; he framed spacious, grassy clearings with species that absorbed ground water and held the sandy soil together (willows and mulberry trees), as well as with native trees, but also planted numerous solitary exotics, clusters of trees (so-called clumps) and shrubs to increase the biological diversity and aesthetic enjoyment (of these, the park's enormous, picturesque sycamores must be mentioned). For the exterior edge of the park (the northern and eastern sides) he planned a "buffer zone" of thickly planted large trees with foliage that would keep out the dust. Nebbien expressed the job of a landscape architect in the following manner, "while every other art uses dead materials for expression, the art of gardening works with the living and flickering power of trees and bushes and the varied forms and hues of flowers".

From Nebbien's design drawings and carefully worded technical descriptions it also comes to light that he consistently strove to develop a mutually reinforcing connection between the natural landscape attributes and the built environment, a "dendrologische und architektonische Zusammenstellung". This creative intent, the employment of two styles, is clearly recognizable in the "picturesque" farmstead building planned for Nádor Island, as well as in the "antique" colonnade of the Neo-classically modeled main gate to the gardens (both structures only existed in designs). Nebbien in his design of the Anglo-Chinois style ornamental farmstead, coming from the "ancient Italian", the "Gothic" and "our misty ancestors" expressed his favorite idea, "what is useful is beautiful and what is beautiful is useful". The Gateway designed to welcome visitors arriving from the city is the clean, rational opposite of the "rustic" buildings of the farmstead; it is an open colonnade made up of 14 paired columns with a balustrade around the roof and crowned by Pallas Athena, the goddess of science (and therefore of landscape architects), riding a two-wheeled chariot pulled by stags.



Figure 10 | H. Nebbien's design for the entrance to the City Park (as seen from the park), 1816
(Galavics, Géza: *Magyarországi angolkertek. Budapest, 1999. color illustration 15*)

Nebbien planned to erect this structure similar to the Brandenburg Gate in the center of the Rondo, a round reception area formed by Italian poplars. Currently the site of the planned gateway is occupied by the monumental metal 1956 memorial (2006) that also functions as an eye-catcher terminating the vista from Városligeti Avenue. The exterior half of the Rondo was destroyed by the construction in the 1950s of Felvonulási Square – which presently functions as a concrete paved parking lot – while the arc of the interior semicircle of the Rondo has survived.



Figure 11 | The sycamores of the Rondo in 2014

5.3.4. CHANGES IN THE AREA OF THE CITY PARK IN THE 19TH CENTURY

The operation of the railway network in Hungary began with the construction of the Pest-Vác line in 1844-1846. The location of the first central station was on the northern border of the densely built up city, at the later site of the Grand Boulevard (Nagykörút). The railway that ran through the northwestern section of the City Park took away a significant area from the park. On this same side, what is now the Budapest Zoo and Botanical Gardens began to be developed in 1866. This, although it was accompanied by the clearing of a great deal of plants, became a genuine architectural treasure and quickly had an irreplaceably popular function. During this decade the number of visitors to the park grew significantly with the masses flooding the City Park for renowned spectacular productions or important celebrations. Neighboring the Zoo, the amusement park developed more modestly, constructed from buildings that were remodeled or reconstructed from time to time, but this was also at the expense of the park.

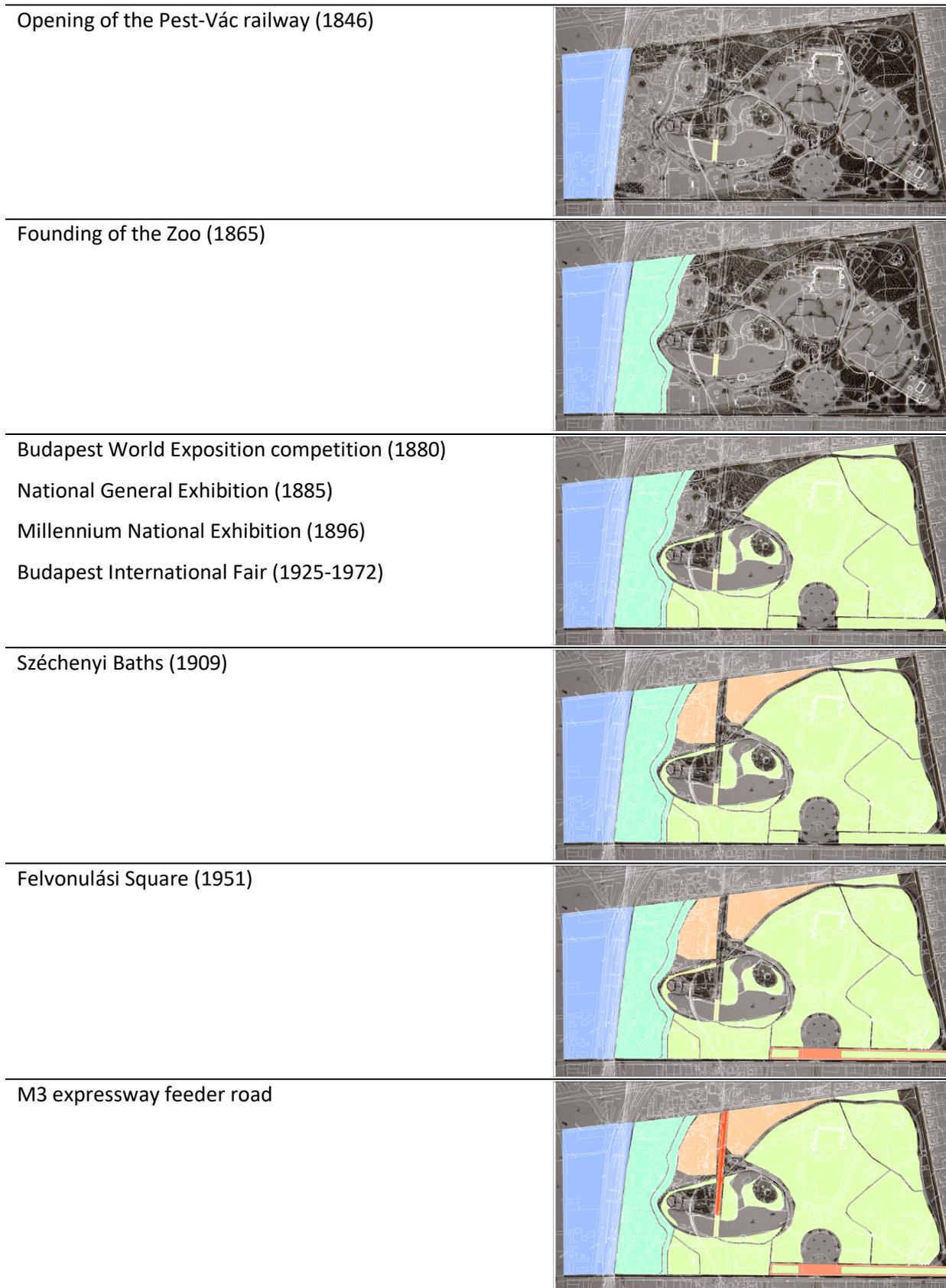


Figure 12 | Major changes (*Béla Nagy*)



Figure 13 | The City Park in 1863 (Forster Center, Design Archives)

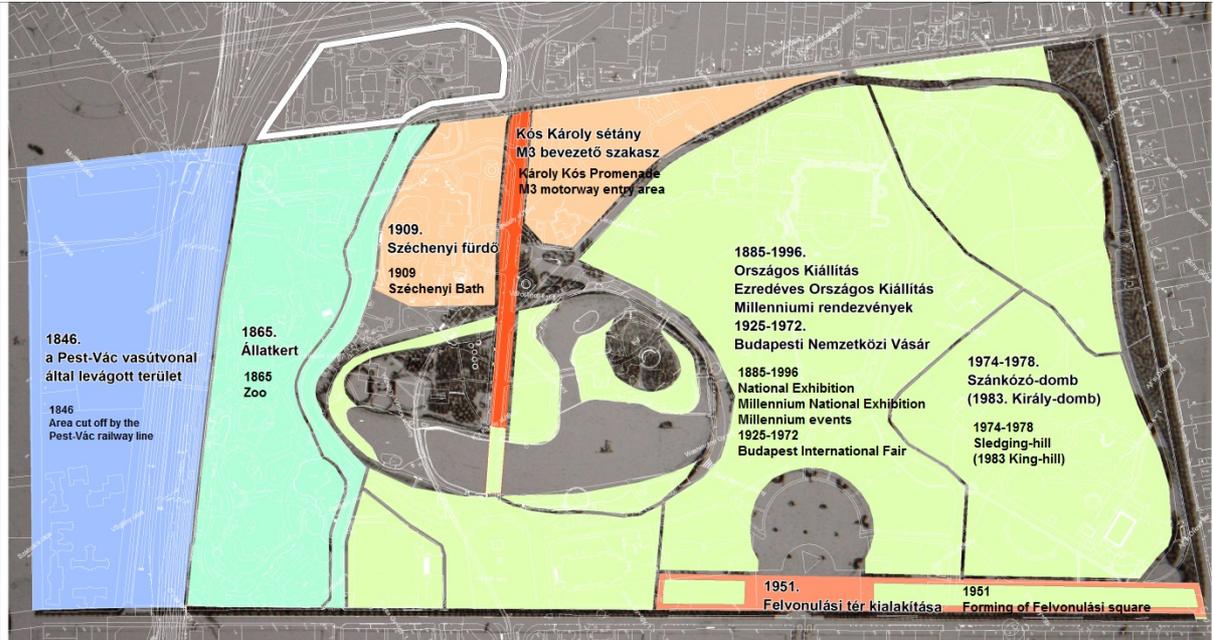


Figure 14 | Summary diagram of the changes to the park sections (Béla Nagy)

5.3.5. CREATION OF ANDRÁSSY AVENUE

The unification of Pest, Buda and Óbuda only took place five years after the restoration of constitutionality in the Compromise of 1867 between the Habsburg Empire and Hungary. During these five years the national government made the most important decisions for the development of the capital, trusting in economic development due to the new political system. The legal framework for large scale urban development was created through Act LVI of 1868 regulating expropriation of property and Act X of 1870 establishing the Metropolitan Board of Public Works. The latter announced the following development objectives: 1.) the regulation of the Danube and the construction of the embankment, 2.) the construction of a new Danube bridge (the Margit Bridge), 3.) the construction of the Grand Boulevard (Nagykörút) and the Avenue (Andrássy Avenue). Act IX of 1872 was aimed at the linking of the Budapest train stations through the construction of the southern railway connection bridge. In addition to the above highlighted projects, the Metropolitan Board of Public Works operating under the direction of the prime minister and whose members were delegated by the national government and the city authorities also prepared regulations for the entire capital and for its individual sections, organized the construction of public utilities and beyond this wielded the legal power of appeals and supervision in construction matters.



Figure 15 | Budapest's national survey map with the regulatory lines indicated, Sándor Halácsy, 1871
(Forster Center, Design Archives)



Figure 16 | The old and new entrances to the City Park; the Rondo and Heroes' Square, aerial photograph from the second half of the 1920s
 (Rapaics, Raymund: *Magyar kertek: a kertművészet Magyarországon. Budapest, é.n., 1940*)

The radial-ring structure followed from the attributes of Pest's urban structure. The main roads led into the outer core of the city from the north, the east, the southeast and the south. Only one element was missing from their rhythm, the northeast. The planning of the *Avenue (Andrássy Avenue)* leading from the center to the City Park began in 1868 and it was constructed between 1872 and 1885. According to the words of Gyula Krúdy, the renowned author from the turn of the century, "this road was the hope of the city". The road only became a significant traffic route in the 20th century; originally it served as a stately promenade. Its mode of development becomes more and more spacious as it heads towards the City Park, with ever increasing vegetation appearing in front of the buildings. The apartment houses lining the route provide a unified overall appearance, but each has its own character and all were of high architectural quality. Included among them is the Opera House, the masterpiece of Hungarian Neo-renaissance architecture designed by Miklós Ybl. The distinct cross-axis highlighting the arrival at the City Park – which strung together the Múcsarnok Art Gallery, the Millennium Monument and the Museum of Fine Arts – was not part of the original composition and was only constructed in the years at the fin de siècle.

The *Andrássy Avenue underground railway* began service for the May 2nd 1896 opening of the exhibition created at the City Park in honor of the thousand-year anniversary of the Hungarian Conquest of the Carpathian Basin.

They justified this costly solution by saying that the promenade character of the route would be spoiled by the running of a horse tramway or electrical tramway. Another argument for it was that neither Paris nor Vienna could show off a mode of transportation like this, only London had its like.

5.3.6. CHARACTERISTICS OF THE SURROUNDING AREAS



Figure 17 | The Art Gallery of the 1885 National Exhibition, the present-day Palme House (*Budapest History Museum*)

The unbroken development of Terézváros (6th District) extends almost all the way to the World Heritage buffer zone. In part due to Andrassy Avenue, by the turn of the century this fully built up section of town had the most uniform appearance of any district in the capital. In several sections the streetscapes of 3-4 story buildings were entirely in the Neo-renaissance style that dominated in the period between 1870 and 1895. The basic form of apartment houses in Pest had taken shape already by the first years of the century and changed little over more than one hundred years, all the way to the 1920s. The stately street front wing was two rooms deep and had an elegant entry and gateway, while the courtyard wings were one room deep and had a gallery encircling a closed courtyard.

On the northeastern side of Terézváros, surrounding the City Park, is the villa district, only part of which is in the World Heritage buffer zone. The lot structure of the villa district was only decided and set during the periods when the City Park and Andrassy Avenue were constructed. Around 1900 the villas lost their character as summer homes and were lived in year-round, and moreover most of the family summer homes were replaced with apartment houses containing several flats. The villas on the outer section of Andrassy Avenue were built on small lots from the beginning, and the lots along Városligeti Avenue were also narrow, so there were fewer and fewer green spaces in the area.

5.3.7. TRANSFORMATION OF THE CITY PARK AT THE TURN OF THE CENTURY⁷

A new era in the development of the City Park began at the end of the 19th century, since the area was designated as the site for two large exhibitions. Three buildings from the National Exhibition held in 1885 – the Hall of Industry, the Royal Pavilion and the Hall of Fine Arts – were intended for long term use. Two of these were destroyed during the Second World War, but the Hall of Fine Arts still stands today under the name of the Olof Palme House.

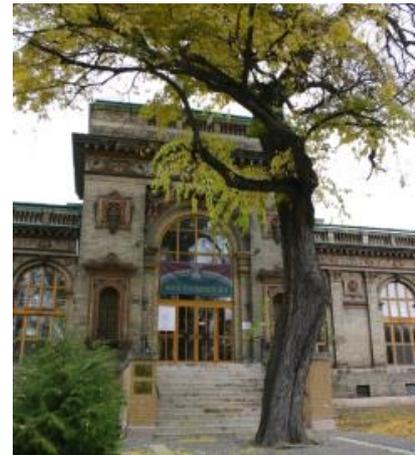


Figure 18 | The Olof Palme House today

The Millennium Exhibition held from May 2nd to October 31st 1896 was the largest such event ever held in Hungary. Hundreds of the park's trees fell victim to the construction projects. However, there were significant new plantings as well in the area of the exhibition. The esplanade between the Rondo and the Hall of Industry was significantly renovated. Connecting the larger island, Nádor Island to dry land was a considerable intervention, as was the construction of a three-arched bridge along the continuation of Andrásy Avenue.

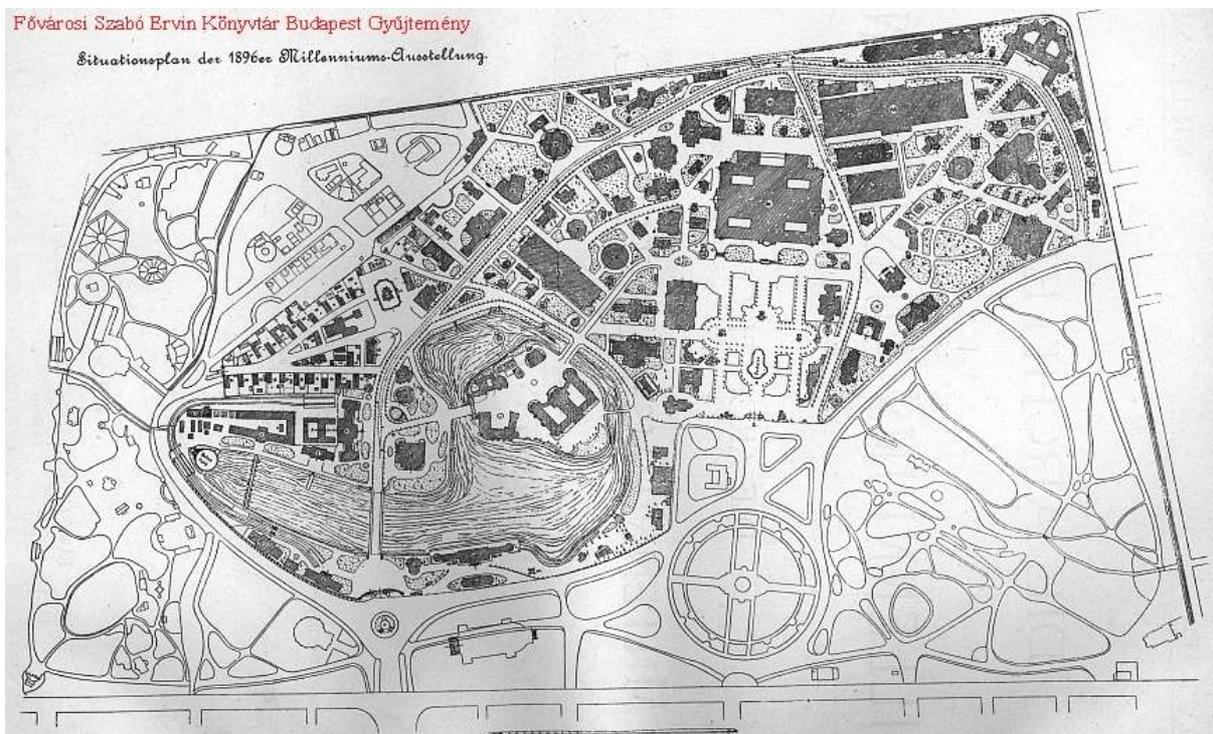


Figure 19 | Map of the 1896 Millennium Exhibition (Metropolitan Szabó Ervin Library)

7 From Sisa, József: *Építészet a 19. században* In: *Magyar művészet 1800-tól napjainkig*. Budapest, 2002. p. 106-111.

This area separated off by a fence and ornamental gates was meant to display every achievement of the country's past and present. Amongst the pavilions, which were arranged in a rather accidental and crowded manner just like at the great world expositions of the era, there were buildings cloaked in imposing historical garb, new engineering constructions and wood framed pavilions with astounding forms alongside other structures that were characterless and uninteresting. The biggest sensation of the exhibition was the so-called Historical Main Group, the pavilion displaying Hungary's eminent art treasures. As it was comprised of copies of renowned Hungarian monuments, even the structure itself represented the country's past. The basic idea was formulated by Albert Schickedanz in the first competition for the building announced in 1893, but Ignác Alpár obtained the commission, who worked out the final design on the basis of the borrowed idea. Like an illustration from a textbook, the freely composed building was divided into three sections according to style: ensembles of Romanesque, Gothic and Renaissance/Baroque architecture. The Romanesque and Gothic ensembles were comprised of copies of actual buildings or their parts, the most distinctive of which being the main wing of the Vajdahunyad Castle from Transylvania that later gave the entire structure its popular name. At world expositions it was customary to place pavilions reflecting the characteristics of different eras and nationalities next to one another. The combination of these into a single building complex and development into a genuine freestanding "architectural museum" of a country at this scale is however virtually unprecedented. Although it was originally made of temporary materials and intended for demolition, due to popular demand it was reconstructed from durable materials to house the Museum of Agriculture.



Figure 20 | The Vajdahunyad Castle (Museum of Agriculture) in 1955 (*fortepan.hu 13272mj*)



Figure 21 | The Vajdahunyad Castle (Museum of Agriculture) in 2014 from the lake/ice skating rink



Figure 22 | The interior courtyard of the Vajdahunyad Castle (Museum of Agriculture) in 2014

Following the closing of the exhibition they set about constructing a monument expressing the national idea on the axis of Andrassy Avenue, according to the designs of Albert Schickedanz. The composition is made up of two curving colonnades with a tall Corinthian column standing in the middle. A statue of the Archangel Gabriel rises atop the column, while equestrian statues of the seven conquering Hungarian chieftains surround the base.

The powerful dynamism of the sculptures created by the young György Zala and their immediate but expressive modeling stands in peculiar opposition to the conventionally classical, detailed formal style of the monument's architecture. At the same time the iconography of the works of sculpture is illuminating, presenting the European/Christian present of the Hungarians alongside their pagan roots, or rather their arrangement one above the other. Statues of Hungarian kings were placed inside the colonnade. The elegantly open modeling, essentially similar to a garden structure in its gracefulness, is precisely appropriate for this structure, which closes off Andrassy Avenue while at the same time serving as an entrance to the City Park.

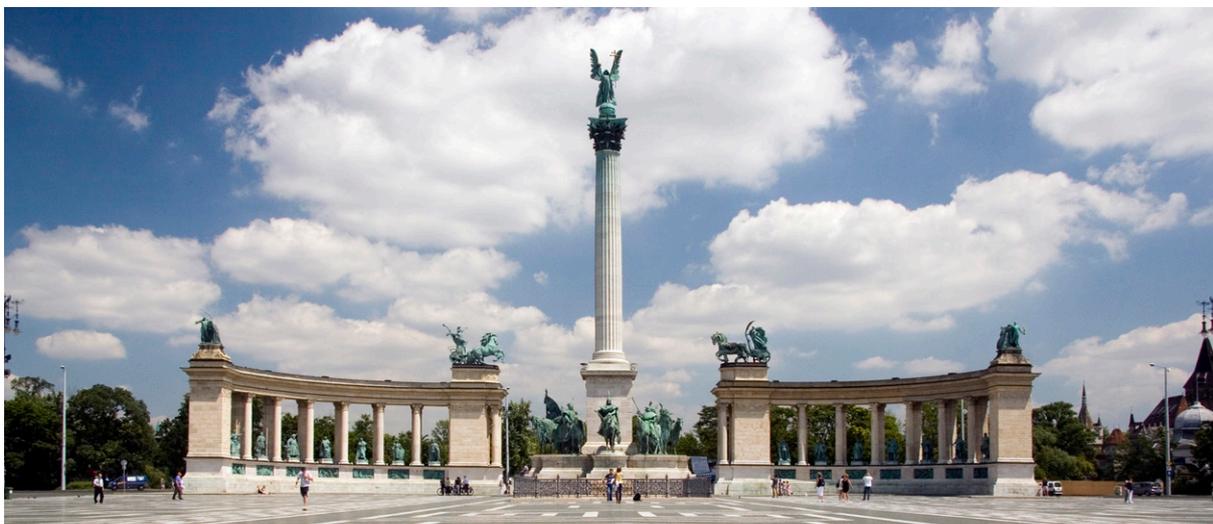


Figure 23 | The Millennium Monument



Figure 24 | The Múcsarnok Art Gallery on a postcard from the beginning of the 20th century (*Szerencs, Zempléni Museum*)

The Múcsarnok Art Gallery (1895-1896) standing to the right of the monument was constructed as one of the pavilions of the Millennium Exhibition based on a design by Schickedanz. Its six-columned Corinthian portico is an example of Neo-classicism, while the colorful majolica decoration adorning the red brick wall refers back to the Renaissance.

The Museum of Fine Arts (1900-1906) opposite the Múcsarnok Art Gallery is a monumental structure; a final example of 19th century museum buildings, and an enthralling but very late relic of the classicist trend. Schickedanz did not contain the building in a single block. The entrance façade facing the square is Neoclassical, with an enlarged version of the Propylaea of Athens combined with an eight-columned Corinthian portico. In the pediment there is an expanded plaster copy of the sculptural decoration depicting the battle of the Centaurs and the Lapiths from the Temple of Zeus in Olympia.

The rising rear wing of the building recalls the architecture of Roman Cinquecento palaces. The intent of the didactic presentation of the historical styles is even clearer in the interiors; on the ground floor Doric, Ionic, Antique, Roman, Renaissance and Baroque halls line up that once held plaster copies of monuments from the appropriate periods. The collection of paintings was housed in the smaller halls of the upper story.



Figure 25 | The Museum of Fine Arts in 1936 (*fortepan.hu* 24131)



Figure 26 | The Museum of Fine Arts in 2014



Figure 27 | The Skating Hall in 2014

In 1893 the Skating Hall was constructed according to the designs of Imre Francsek, with its convex-concave mansard domes modeled on those of the Royal Pavilion designed by Miklós Ybl (1885). The existence of the *Széchenyi Baths* constructed between 1909 and 1926 was made possible in the City Park by the discovery of a thermal spring in the area in 1878. At the core of the symmetrical Neo-baroque building are the thermal baths in the two interior courtyards, and it is adorned with three domes on its main façade facing Kós Károly Promenade. Two more recent wings surrounding courtyards are attached to the sides of this, the men's and women's public baths. These are then connected by a half oval structure running along Állatkerti Road, creating a large courtyard with outdoor pools.



Figure 28 | The Széchenyi Baths in 2014



Figure 29 | Budapest national survey map, 1908 (Forster Center, Design Archives)

5.3.8. TRANSFORMATION OF THE CITY PARK AT THE MIDDLE OF THE 20TH CENTURY

The architecture of the Regnum Marianum Roman Catholic parish church located at the axis of Damjanich Street on the park side of the then narrow Aréna Road – now Dósa György Road – was motivated by ideological considerations and expectations. On one hand it was to express thanks for being freed from the Commune of 1919 and on the other to pray for the breaking of the “shackles of Trianon”. Its designer, Iván Kotsis borrowed the range of forms for this intended memorial building from the southern French Romanesque (the era of St. Stephen the King and the foundation of the Hungarian state), but the “world” of the Sacré Coeur in Paris also left its mark.



Figure 30 | The Regnum Marianum parish church (Forster Center, Photographic Archives)

International fairs were organized in Budapest starting from 1925. For these they used the area of the Museum of Agriculture in addition to the Hall of Industry, as well as building numerous temporary pavilions. By 1949 the size and opulence of the fairs held following the war had reached that of those from before it. At this time, on the site of the demolished Hall of Industry, the Petöfi Hall was built in 1986, which later was significantly expanded.

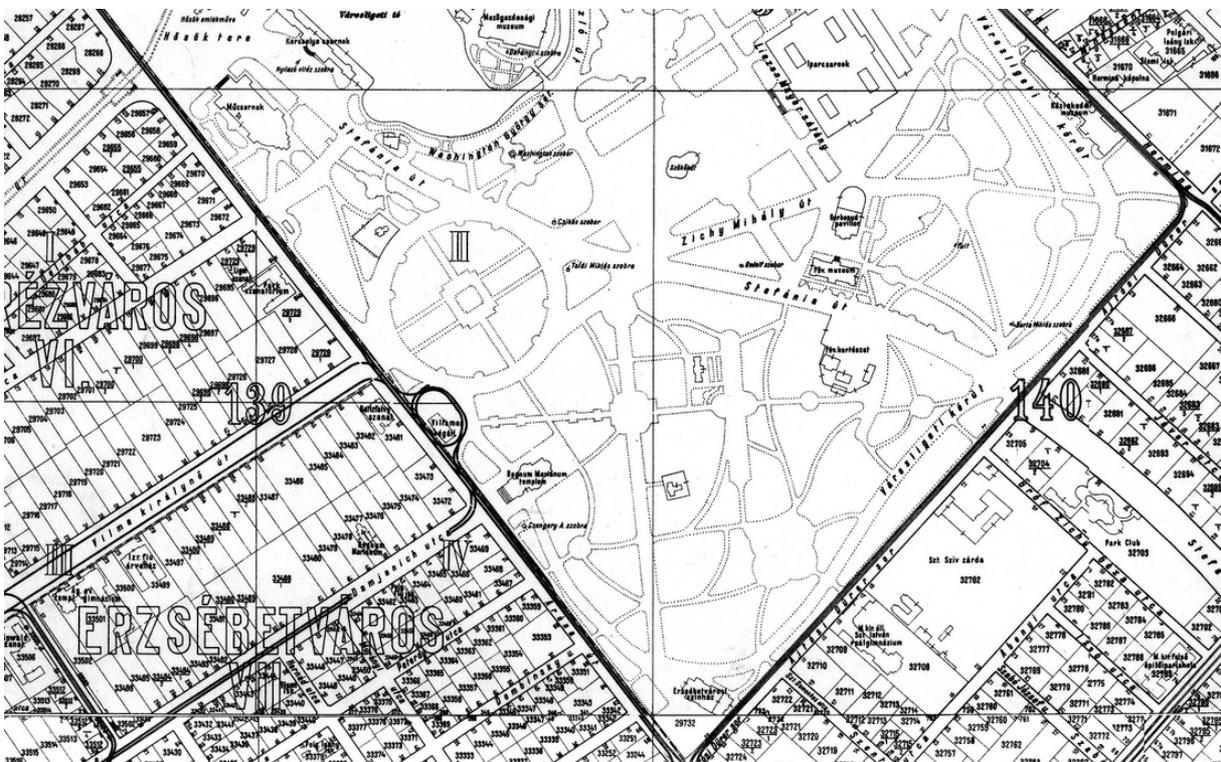


Figure 31 | Detail of the administrative map of Budapest, 1937 (Forster Center, Design Archives)

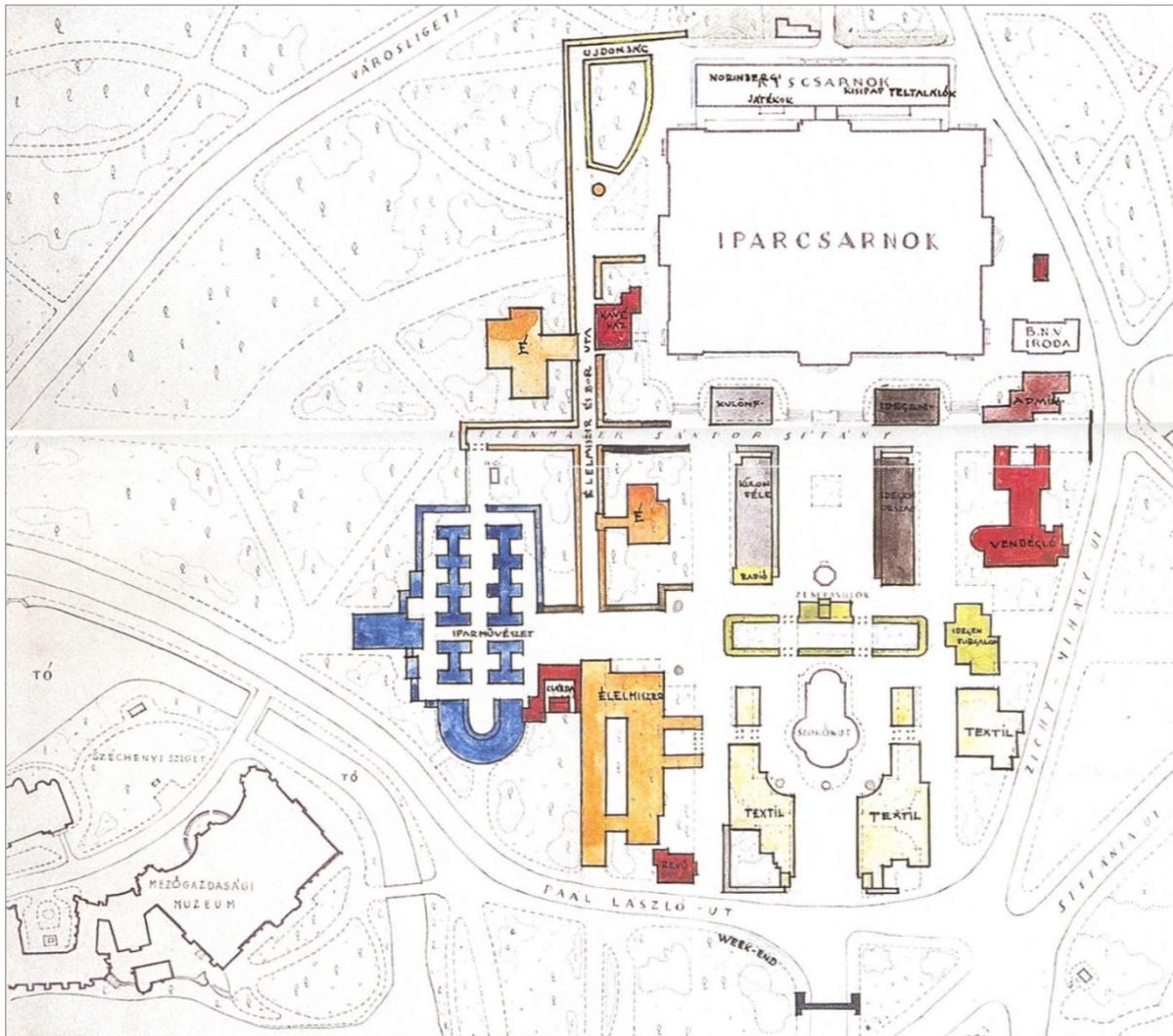


Figure 32 | Competition design for the site of the 1934 Budapest International Fair
(Forster Center, Hungarian Museum of Architecture)

The popularity of the fairs constantly grew, and it became clear at the beginning of the 1970s that the park was not able to host a fair of this size, so in 1974 the Budapest International Fair moved. However, traces of it are still visible. When the statue of Stalin was erected, five years prior to it being pulled down on October 23rd 1956, Dózsa György Road was widened to 85 meters, truncating the Rondo of Nebbien. The Regnum Marianum church and the Municipal Theater also fell victim to this. A significant intervention was the extension of the path of the Millennium Underground and Kós Károly Promenade in the 1970s. The latter serves as a direct feeder from the M3 expressway into the city center.

The City Park was renovated in the 1970s. This remodeling was one of the era's largest domestic landscape architecture jobs and many new elements were placed in the park (playgrounds, a sun terrace and the Garden for the Blind). On the 100th anniversary of FŐKERT Zrt., the company responsible for maintaining the capital's parks, the Small Botanical Garden was constructed in the City Park, and the Garden for the Blind as a part of this (this separate garden designed by Vera Csorba presents the diverse beauty of flora to visually impaired people through the senses of touch and smell).

A few years later, between 1974 and 1978, within the context of a large-scale garden revitalization program several thousand trees were planted in the City Park (in part replacing the “historic” stock of trees), and many paths were renovated, playgrounds constructed and outdoor furniture introduced. At this time a sledding hill was constructed – in part from the materials from the demolished Budapest International Fair buildings – which became a site of cult-like significance in the park following the first performance of the rock opera “Stephen the King” (1983).

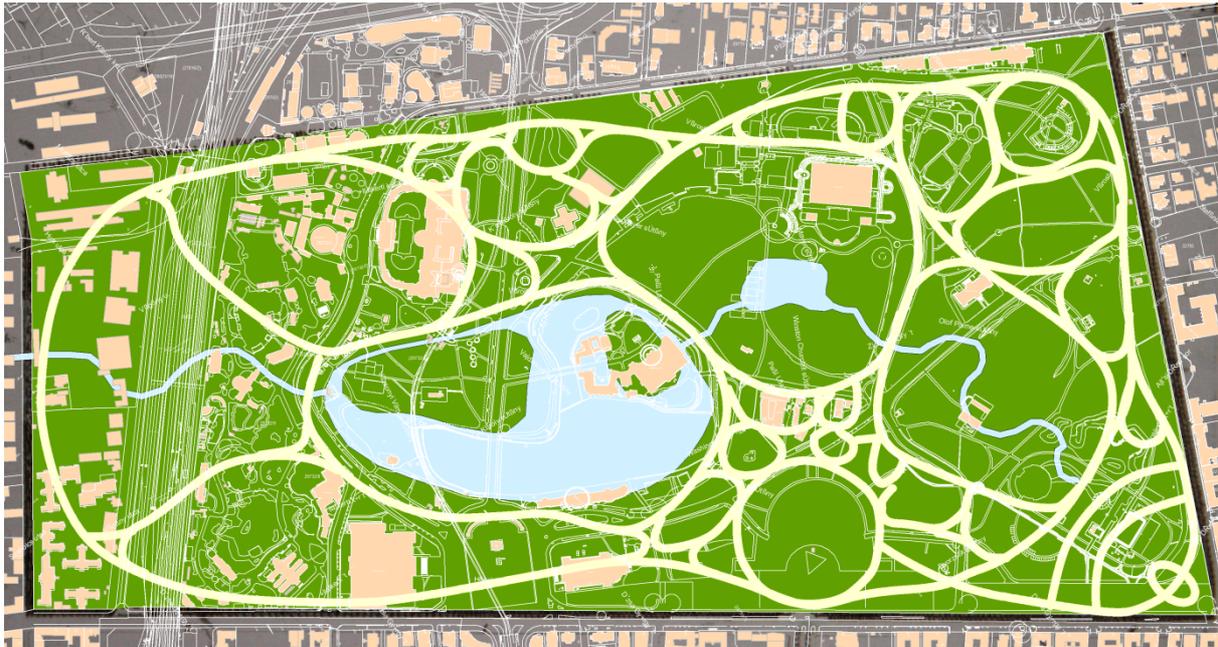


Figure 33 | The main paths, planned lakes and islands of the Nebbien design superimposed on the present-day map (Béla Nagy)

5.3.9. SIGNIFICANCE OF THE CITY PARK

The City Park of Budapest in its substance and spirit can be considered at least as much of a landmark in the culture of European open space architecture as it is a milestone in the history of Hungarian landscape gardening. Similar to the well-known, renowned western European palace gardens (e.g. Versailles, Wörlitzer Park or Sanssouci in Potsdam) and urban public parks (e.g. the Tiergarten in Berlin and Regent’s Park in London) the City Park is an outstandingly high-quality work of engineering and artistry whose living and man-made elements have condensed together into a genuine artistic ensemble in the nearly 200 years of its existence. Whether one considers its size, which is similar to an urban district, its valuable, aged flora or its man-made lake, or viewing it from the aspect of its picturesque historic buildings (e.g. the Vajdahunyad Castle, the Széchenyi Baths or the Skating Hall) and iconic monuments and outdoor sculptures (e.g. the Millennium Monument or the statues of Anonymous and George Washington) the City Park is a “historic garden” certainly worthy of historic preservation.

It has an eminently organic character, as it is an ensemble of garden, buildings and artworks. In the history of the City Park the *personas of the director of its commission board, Archduke Joseph Habsburg, Palatine of Hungary, and its creator, Christian Heinrich Nebbien* represent an inseparable memorial value, that is they create a “genius loci” (the protective spirit of a place). The intent and vision of its creators, the exciting history, problems and proper solutions in establishing the park, the eras of the park, the social and cultural role of the City Park in the life of the capital now and in the past together embody its historic value. The park in its reality and in the national consciousness is a place of remembrance, in its context and historic/historical complexity has been, is and will be present in the physical, mental and symbolic image of the city (and the country).

The functions that were introduced later (e.g. the Amusement Park, the Petőfi Hall and the Transportation Museum) push the organic spatial structure of the park originally designed in a scenic style nearly to bursting and increase the burden on the flora. Transportation links and traffic demands transformed the road network of the City Park as well, principally in materials and width, because fortunately for the most part the roads still run along their original routes.



Figure 34 | Elements that still allude to the main elements of Nebbien’s design: the reduced water surface and fragments of walkways (Béla Nagy)

Similar to Europe’s renowned historic gardens, the City Park has had to account for the fact that the materials and elements of the gardens have grown old in many places. Their rehabilitation from a variety of aspects is a pressing duty that can possibly be accompanied by a few changes or broadening of functions that can be integrated into the park (high-quality new buildings providing primarily cultural services in the place of old ones). However, the extent of the planned interventions and construction may in no way detract from the heritage of Nebbien, the “public garden”, “woodland” atmosphere that truly makes this slice of Budapest world famous.

5.4. STRUCTURE OF DEVELOPMENT ON ANDRÁSSY AVENUE AND IN THE CITY PARK

Andrássy Avenue, which comprises a part of the World Heritage, is a key element in the historical development of Budapest and since its construction has been an important axis in the urban structure that connects the Downtown with the City Park.

1. Heroes' Square – City Park

Heroes' Square is the paved urban square bounded by the Museum of Fine Arts, the Múcsarnok Art Gallery and the Millennium Monument that terminates the axis of Andrássy Avenue towards the green space of the City Park



2. Kodály Circus – Heroes' Square

2.2. Bajza Street – Heroes' Square

Freestanding construction with service roads on either side in both sections

2.1. Kodály Circus - Bajza Street

Continuous attached construction with front yards

3. Oktogon – Kodály Circus

Continuous attached urban construction with service roads on either side
(2x2 lanes of traffic + walkway on both sides + service road + sidewalk)

4. Bajcsy-Zsilinszky Road – Oktogon

Continuous attached urban construction with an avenue
(2x2 lanes of traffic + bike path on both sides + parking lane + sidewalk)

Figure 35 | Structure of the development of Andrássy Avenue (Google Maps)

6. ATTRIBUTES OF THE AFFECTED WORLD HERITAGE AREA



Figure 36 | The Heroes' Square ensemble: a part of the World Heritage site (source: www.panoramio.com-80781827.jpg)

The determination of the value and attributes in the territory of the site (the Heroes' Square ensemble) and the buffer zone (the rest of the City Park) is evaluated as follows:

VALUE		SITE	BUFFER ZONE	ATTRIBUTE
CULTURAL	modern design solutions using the most up-to-date contemporary technical means high degree of architectural integrity, Eclectic and Neo-renaissance buildings Criterion IV	+	+	The attributes are in the architectural value
SCIENTIFIC / ENGINEERING	many structures were outstanding engineering feats for the time Criteria II and IV	+	+	Millennium Underground Railway Andrássy Avenue Andrássy Avenue buildings
URBAN DESIGN	Budapest was created through the unification of Pest, Buda and Óbuda (1873) Criteria II and IV	+	+	Andrássy Avenue as a new traffic route
	Budapest was one of the most modern capitals at the turn of the 20 th century Criteria II and IV	+	+	Underground railway Andrássy Avenue City Park
	Andrassy Avenue was the embodiment of the millennium unity of Budapest Criteria II and IV	+	+	Andrássy Avenue

VALUE		SITE	BUFFER ZONE	ATTRIBUTE
CONTINUATION OF URBAN DESIGN	the uniformity and extent of Andrásy Avenue's Historicist construction Criteria II and IV	+	+	Buildings of Heroes' Square Millennium Monument
	the continent's first underground railway Criteria II and IV	+	+	Millennium Underground Railway
	urban design-architectural impact, modern technical means Criteria II and IV	+	+	system of streets, public spaces, system of lots, development, building stock, street furniture, public objects
ARCHITECTURAL AND AESTHETIC	numerous cultural buildings have been constructed in the City Park since the second half of the 19 th century			
	cosmopolitan role progressive (European) urban design-architectural center modern technological developments Criterion II modern design solutions using the most up-to-date contemporary technical means high degree of architectural integrity Criterion IV		+	Budapest Zoo and Botanical Gardens <i>(1866, remodeling: Kornél Neuschloss, Károly Kós, Dezső Zrumecky, Károly Ráde, Keresztély Ilsemann 1912)</i>
	cosmopolitan role Criterion II design solutions suitable for modern society high degree of architectural integrity Criterion IV	+		Múcsarnok Art Gallery (new) <i>(Albert Schickedanz and Fülöp Ferenc Herzog 1896)</i>

VALUE		SITE	BUFFER ZONE	ATTRIBUTE
CONTINUATION OF ARCHITECTURAL AND AESTHETIC	cosmopolitan role	+		Museum of Fine Arts <i>(Albert Schickedanz and Fülöp Ferenc Herzog 1906)</i>
	Criterion II			
	design solutions suitable for modern society			
	high degree of architectural integrity			
	Criterion IV			
	cosmopolitan role	+		Millennium Monument <i>(Albert Schickedanz 1906, sculptor: György Zala)</i>
	Criterion II			
	high degree of architectural integrity			
	Criterion IV			
	cosmopolitan role	+		Memorial Stone for Hungarian Heroes <i>(dedication of the memorial 1929, reconstruction by Béla Gebhardt 1956, reconstruction 2001)</i>
	Criterion II			
	high degree of architectural integrity			
	Criterion IV			
	cosmopolitan role		+	Vajdahunyad Castle (historical building ensemble) <i>(Ignác Alpár, 1896, remodeled: 1908)</i>
	Criterion II			
	high degree of architectural integrity			
	Eclectic and Neo-renaissance buildings			
	Criterion IV			
GARDEN AND LANDSCAPE ARCHITECTURE	cosmopolitan role		+	the history of the City Park and the continuous transformation of the park following the demands of the city
	Criterion II			
	design solutions suitable for modern society			
	Criterion IV			

VALUE		SITE	BUFFER ZONE	ATTRIBUTE
ASSOCIATIVE	design solutions suitable for modern society high degree of architectural integrity Criterion IV	+		section of Hungary's capital of outstanding importance, Heroes' Square ensemble, National Memorial Site
	cosmopolitan role Criterion II high degree of architectural integrity Eclectic and Neo-renaissance buildings Criterion IV		+	numerous foreign consulates and social and political organizations are found in the buildings of the area
	cosmopolitan role Criterion II high degree of architectural integrity Eclectic and Neo-renaissance buildings Criterion IV	+	+	the area is a highlighted tourist destination and a domestic and international economic factor in tourism
	cosmopolitan role Criterion II	+		the main program for the 34th Eucharistic World Congress were held at Heroes' Square (25 May 1938)
	political role of the capital Criterion IV	+		reburial of Prime Minister Imre Nagy, the beginning of the fall of communism (16 June 1989)

Table 2.

7. PLANNED INTERVENTIONS

7.1. GENERAL INTRODUCTION TO THE LIGET BUDAPEST DEVELOPMENT

The Liget Budapest Project has set its sights on the full revitalization and complex development of the City Park. During the project the green space of the park will increase and will be augmented with new cultural institutions and recreational opportunities. The goal of the project is for the City Park and its surroundings to be known throughout Europe as one of Budapest's defining tourist and cultural *destinations* and a cultural recreational park. The project is built upon four pillars: the museums (1), the park (2), the other related institutions (3) and the development elements (4).

7.2. INTRODUCTION TO THE ELEMENTS OF THE LIGET BUDAPEST DEVELOPMENT⁸

7.2.1. GENERAL INTRODUCTION⁹

For more than one hundred years the City Park has been a special public park with a role unique in Europe. During its organic growth not only has its function as a place for relaxation related to its green space developed, but it has also provided a home to numerous cultural institutions. This historical growth and natural development into a public park with cultural roles has made the City Park suitable to provide a home for further museums and recreational functions together with an increase and renovation of its green spaces.

Museums Within the framework of the Liget Budapest program, the City Park will be enhanced with five new buildings: the New National Gallery, the Museum of Ethnography, the House of Hungarian Music, the Városliget Theater and, within the extended area of the Zoo and as a part of the Pannon Park, the building of the BIODOME. Within the context of the Liget Budapest Project a network of collaborating institutions with public collections will be created that will be diverse and provide European-level opportunities for quality leisure time activities.

Park Alongside the creation of the City Park the park will also undergo a comprehensive revitalization on the basis of the landscape architecture design competition. Through the rehabilitation of the park's green space and traffic network, unnecessary paved surfaces will be removed, and thanks to this the green space will increase from the present 60% to 65%. In the renovated park there will be new recreational

8 Városliget Zrt. 2014. (<http://www.ligetbudapest.org/index.php?page=page&id=3>)

9 Városliget Zrt. 2014. (<http://www.ligetbudapest.org/index.php?page=single&id=5>)

7.2.2. COMPREHENSIVE REVITALIZATION OF THE CITY PARK

The government's will have related to the development of the museums will ensure significant support for the broadening of museum activities and the development of proper infrastructure. The government in its resolution number 1353/2011.(X.20.) agreed with the "unification of the Museum of Fine Arts and the Hungarian National Gallery through the assimilation of the Hungarian National Gallery". The resolution – which clarified and supplemented Governmental Resolution 1031/2013. (I.30.) – among other things includes the creation of the new national public collection building complex (hereinafter: the City Park, and "together with this, the revitalization of the entire City Park and its development into a family cultural-recreational entertainment park through the development of its independent tourist and recreational aspect and brand".

THE PARK

The Liget Budapest Project is an integral part of the comprehensive renewal of the entire green space of the City Park, the creation of a new, modern system of green spaces through their increase in size, the transformation of the City Park into a cultural-recreational entertainment park in keeping with its historical past and the preservation of its character as a landscape garden.

The City Park can be part of a park ring differentiated on the basis of its functions in the typically brownfield area lying between Hungária Boulevard and the planned Körvasúti Boulevard, thereby increasing the offers of the parks and smoothing out seasonal burdens. The two furthest points of the park ring are associated with innovation (University City, InfoPark, Graphisoft Park, renewing Óbuda Gas Factory).

The network of large parks is made more complex by local parks and institutional areas with significant green areas.



Figure 38 | The ring of city parks and larger green zones

THE MUSEUMS

The portion of the development known under the name of the Liget Budapest Project planned for the City Park extends to the renovation of the Roman Hall of the Museum of Fine Arts, the expansion of the Budapest Zoo and Botanical Gardens, and the renovation of the Budapest City Circus and the former Hungarian Technical and Transportation Museum.

OTHER RELATED INSTITUTIONS

The Liget Budapest Project extends to the development of currently operating institutions including the Millennium House (Olof Palme House), Budapest City Circus, the Zoo and the Vajdahunyad Castle. New projects will be implemented and new green spaces will be created in the area examined.

OTHER

As a result of the developments the comprehensive transformation of the City Park's transportation system will occur.

PUBLIC COLLECTIONS

The current and planned museums and public collections to be located in the City Park are as follows:

- The current building of the **Museum of Ethnography** – until 1949, the Hungarian Royal Curia – was constructed between 1893 and 1896 (designed by: Alajos Hauszmann). In the interest of restoring the original function of the Curia building on Kossuth Square it is necessary to move the museum currently utilizing the building along with its significant collections that presently can only be exhibited in a limited manner. The significance of the Museum of Ethnography to social and cultural history justifies an appropriate location for it.

The Museum of Ethnography needs a new, up-to-date building.

Planned new museum building.

- The **Museum of Fine Arts** was completed between 1900 and 1906 (designed by: Albert Schickedanz and Fülöp Ferenc Herzog). The Roman Hall is a special part of the building that has been closed and not admitted visitors for 70 years. This space is needed in the interest of reunifying the collections of the Museum of Fine Arts and the Hungarian National Gallery through the creation of the **New National Gallery**. The Hungarian and international materials exhibited in the reunified collection of the new National Gallery will be from the period from 1800-1950. The collection was divided in 1957 and was placed in the Hungarian Royal Curia building. The National Gallery moved into the Royal Palace building in 1975.

The reunification of the two collections is justified for their integrated management and harmonious presentation. The study plan prepared for the preliminary arrangements for the reconstruction of the Royal Palace in Buda (VÁR-25 strategic study plan 2012) recommended the placement of new representative functions here, following its remodeling in accordance with a condition close to the original.

For the reunification of the collections of the Museum of Fine Arts and the Hungarian National Gallery an independent, new, up-to-date building is needed.

Planned new museum building.

- The **House of Hungarian Music** can provide a place to present Hungarian music and musical arts, enriching the surrounding functions. In addition to Ferenc Erkel, Franz Liszt, Béla Bartók and Zoltán Kodály, the appropriate, up-to-date, interactive presentation of the lives and art of famous Hungarian musicians, singers and performers requires a new building. **The House of Hungarian Music needs a worthy location appropriate for the quality of Hungarian musical culture.**

Planned new museum building.

- The **Múcsarnok Art Gallery** was completed for the celebrations of the 1,000 year anniversary of the Hungarian conquest of the Carpathian Basin (designed by: Albert Schickedanz, with the collaboration of Fülöp Ferenc Herzog, 1895-1896).

It is the exhibit space for the Hungarian Academy of Art.

- The **Hungarian Museum of Agriculture** occupies a portion of the Vajdahunyad Castle, or by its official name “Historical Building Ensemble” (designed by: Ignác Alpár). This was constructed primarily of wood for the Millennium Exhibition, but was later reconstructed from durable materials (1904-1908). The building is in need of reconstruction.

Modernization and renovation.

- The former **Hungarian Technical and Transportation Museum** was originally the Transportation Hall (designed by: Ferenc Pfaff) of the Millennium Exhibition (1896), and from 1899 was the Hungarian Royal Transportation Museum. The museum was only restored in part (1966) following the Second World War and then expanded (1987). The reconstructed building could receive an interactive function presenting innovation.

- **Restoration of the Millennium House (Olof Palme House as the former Art Gallery)** was constructed as the Art Gallery for the National General Exhibition of 1885 (designed by: Ferenc

Pfaff). Today it is the temporary exhibition space for the House of Hungarian Creative Artists.

The improvement of the technical conditions, expansion and proper location of these museums and public collections with rich histories and collections of artworks can significantly contribute to a great number of their artistic treasures and historic objects that are currently in storage being displayed in exhibit spaces so that as many visitors as possible can become familiar with them.

7.2.3. MAIN DATA OF THE PLANNED DEVELOPMENTS

The main internal dimensions of the planned developments – which can still be modified during the drafting of the final architectural plans – can be summarized as follows:

MAIN EXISTING AND NEW BUILDINGS	net ground area (m ²)	total floor area (m ²)
New National Gallery	13,285	46,680
Millennium House (Olof Palma House)	1,238	2,056
Museum of Ethnography and Visitor Center	11,314	31,972
House of Hungarian Music	4,210	9,593
House of Innovations	3,648	17,075
Other (including underground parking)	2,000	13,330
SUB-TOTAL (NEW AND RECONSTRUCTION)	37,592	138,800
SUB-TOTAL (EXISTING)	22,049	
TOTAL	59,641	

Table 3 | Total net built in area, according to the permit desing (Source: Garten Landscape Achitect Studio)

It can be established that **the built-in area** 59,641/910,978 cca 6,55% is **below the 7% limit**.

7.3. REVIEW OF THE CITY PARK BUILDING REGULATIONS

The obligation to prepare the City Park Building Regulations was set down in *Act CCXLII of 2013 on the Renovation and Development of the City Park (the "City Park Act")*. The Budapest Metropolitan Government conducted the partnership negotiations, in the context of which about 200 civic organizations and private individuals provided their opinions. Taking these into account the Budapest Metropolitan Council adopted the City Park Building Regulations on 30 June 2014 (modified: by decree 20/2016.(VI.10.) Főv.Kgy.).

7.3.1. GENERAL REVIEW

The City Park Building Regulations are based on the set of requirements prescribed in the laws on construction and the working sections necessary from a professional standpoint, which also satisfy the requirements of the *"City Park Act"*.

The content of the City Park Building Regulations adopted as an ordinance by the Budapest Metropolitan Council – also taking into account the differences defined in the *"City Park Act"* – satisfies the general construction law requirements, as well as the legal and professional requirements related to the preparation, verification and acceptance of plans.

During the planning process, the summary of problems is based upon the findings of the working sections on the exposure and evaluation of the situation. The development plan, which is a synthesis of the professional field's working section, encompasses the recommendations for resolving the problems. The conception summarizes in its complexity the recommendations related to the shaping of the environment, their reciprocal effects and recommendations related to minimizing unfavorable impacts. Within this framework the considerations and the reciprocal relationships related to urban planning, development, transportation, environmental protection, green areas, water utilities, energy utilities, electronic communications and cultural heritage preservation (historic properties, archaeology, etc.) are elaborated. The recommendations developed in this manner comprise the basis of the regulatory conception, which also includes the main objectives for regulation as well as the most significant regulatory elements, parameters and provisions.

The provisions of the building regulations have been elaborated on the basis of the verification of the regulatory conception, or in other words the normative text later adopted as an ordinance and the regulatory plan that comprises an annex to the regulations.

7.3.2. REGULATORY CONCEPT¹⁰

Of the working sections supporting the City Park Building Regulations, the statements defining the structure and characteristics of the area should be highlighted:

	THE SITE OF THE CITY PARK	THE GREEN AREA ZONE
Demarcation:	Városligeti ingatlan (29732/1 hrsz.) 	
Area:	(Including Heroe's Square) 962,303 m ²	(Park area) 911,392 m ² (net 910,977 m ²)
Ground area of existing construction to remain:	34,588 m ²	22,049 m ²
New construction according to the construction plan:	27,710 m ²	37,592 m ²
Planned percentage of developed area:	6,3%	6,55%

Table 4 | Summary of the parameters based on the construction plan (left side)

Source: City Park Building Regulations / 03_1_Alatamaszto.pdf / page 10.

(<http://infoszab.budapest.hu:8080/Hirdetmenyek.aspx>)

¹⁰ City Park Building Regulations / 03_1_Alatamaszto.pdf / page 55. (<http://infoszab.budapest.hu:8080/Hirdetmenyek.aspx>)

On the basis of the resulting condition and the planned use of the area, the zoning distribution of the area is the following¹¹:

Construction zones / zones

- Areas not intended for construction:

- Z-VI City Park
- Kb-Bk Paved public square
- Köu Transportation areas

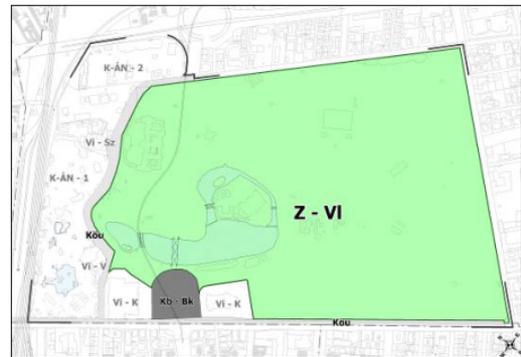


Figure 39

- Areas intended for construction:

- Vi Institutional areas
- K – ÁN Special – Zoo and Botanical Garden areas



Figure 40

7.3.3. CONSTRUCTION SITES DESIGNATED IN THE CITY PARK (Z-VI), FUNCTIONS THAT CAN BE ESTABLISHED¹²

The primary consideration in the demarcation of the construction sites was for new buildings to be constructed when possible in areas already utilized for technical purposes. In accordance with this, there is an opportunity to place new buildings on the sites of the paved area along Dózsa György Road, the Petőfi Hall and the Beer Tent.

11 City Park Building Regulations / 03_1_Alatamaszto.pdf / page 56. (<http://infoszab.budapest.hu:8080/Hirdetmenyek.aspx>)

12 Working section supporting the City Park Building Regulations (source: www.budapest.hu / 03_1_Alatamaszto.pdf 56. oldal)

7.3.4. BUILDING HEIGHT¹³

CITY PARK:

Maximum cornice height for the building sites labeled "A-E" (see: regulatory plan): 25 m.

Architectural designation (pointwise) maximum height allowed is 40 meters.

Further allowed building heights in the area:

For building sites labeled "F-G": 7.5 meters

For guest service facilities and restrooms: 5.0 meters

C7.3.5. OTHER PROVISIONS

FUNCTIONS OF THE AREA AND THE BUILDINGS OF THE CITY PARK:

- Recreation and leisure,
- sport,
- cultural,
- tourism,
- guest service,
- transportation,
- buildings with security functions, as well as
- parking lots and structures providing space for automobiles and bicycles are allowed.

Retail trade may not be established except when as a function supplementing the primary function.

REGULATION OF THE FUNCTION OF THE CITY PARK

- Various recommended functions for park areas:
 - playground,
 - sports field,
 - dog park,
 - free, open spaces with a character that is to be preserved,
 - special purpose park areas (Garden for the Blind).
- Running track with a rubberized surface is to be constructed,
- The placement of public objects is possible on the basis of the public space modeling plan.

PROTECTION OF THE STOCK OF PLANTS

- In the regulatory plan valuable trees and groups of trees have been designated,

13 City Park Building Regulations / 03_1_Alatamaszto.pdf / page 58 (<http://infoszab.budapest.hu:8080/Hirdetmenyek.aspx>)

- The clearing of trees and the replacement of trees at the same time must be planned on a schedule of several years,
- Replacement of trees may endanger free, open spaces designated for preservation in the regulatory plan.

CONSTRUCTION OF GREEN ROOFS

- Roof gardens or equivalent green roofs of greater extent above construction below the ground level should be created,
- Green roofs must also be created for the roofs of new flat-roofed buildings while taking into account skylights and mechanical equipment.

REGULATION OF THE LAKE

- A permanent water surface must be ensured for the area of the lake – except for the ice skating rink,
- The ability to boat around Széchenyi Island must be ensured.

TRANSPORTATION

- Designation of the zoning provisions and network role of public roads,
- Ensuring the technical protection of the Millennium Underground,
- Determination of provisions related to the development of the park's network of roads,
- Designation of the system of conditions for transportation improvements related to the construction of the particular projects,
- Determination of the system of conditions for transportation improvements necessary for the closing of Kós Károly Promenade to traffic.

PARKING

- Designation of local and functional differentiation regulations for the determination of the number of parking spaces necessary for proper use,
- Determination of the location of surface parking and parking structures.

7.3.6. CONSTRUCTION PLAN

The recommended locations of the planned museum buildings within the City Park (6 museums – 5 new buildings)

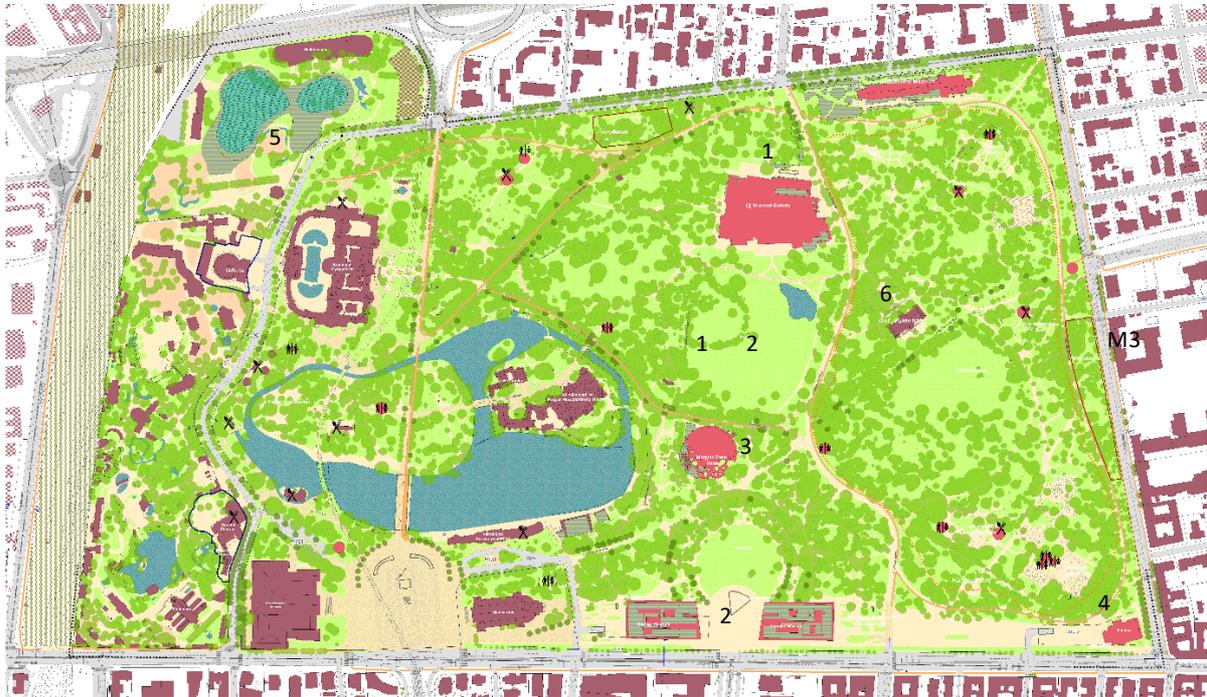


Figure 41 | Construction plan 2017 (source: Városliget Zrt.)

1: New National Gallery
4: Városliget Theater

2: M3: Museum of Ethnography
5: BIODOME

3: House of Hungarian Music
6: Millennium House

land registry lot no.	zone / construction zone	designation	area (m ²)	present			planned					re-commended minimum green area
				green area (m ²)	water surface (m ²)	green area ratio (%)	green area (m ²)	roof garden soil depth ≥ 81 cm (m ²)	roof garden soil depth ≤ 20 cm (m ²)	water surface (m ²)	green area ratio (%)	
29732/1		City Park property	962 303	565 059	7 328	58,0	587 293	8 752	0	48 566	63,9	
29732/1	Vi-K	Museum of Fine Arts	21 548	5 130	0	23,8	5 130	0	0	0	23,8	20%
29732/1	Vi-K	Műcsarnok Art Gallery	18 117	6 578	0	36,3	8 457	0	0	0	46,7	20%
29732/1	Kb-Bk	Heroes' Square	22 568	0	0	0,0	171	0	0	0	0,8	0%
29732/1	Z-VI	City Park	911 392	551 927	7 328	60,5	596 927	8 752	0	45 260	65,5	65%
29732/8	VI-V	Gundel Restaurant	5 841	800	0	13,6	900	0	0	0	15,4	15%
29732/9	K-ÁN-1	Budapest Zoo and Botanical Gardens	107 618	39 727	7 501	42,1	39 727	0	0	7 501	42,1	40%
29753	K-ÁN-2	former Amusement Park	40 209	6 061	0	15,1	24 944	0	12 631	1 289	25,0	25%
29732/5	K-ÁN-2	former Amusement Park	25 124	4 810	0	19,1	24 944	0	12631	1 289	25,0	25%
29743	K-ÁN-2	Toxicological Institute	2 226	0	0	0,0	24 944	0	12 631	1 289	25,0	25%
29732/3	Vi-Sz	Budapest Grand Circus	4876	0	0	0,0	100	0	2500	0	5,9	5%

Table 5 | Green space ratio and proposed minimum green space (working sections supporting City Park Building Regulations (source: <http://infoszab.budapest.hu:8080/Hirdetmenyek.aspx>))

7.3.7. REGULATORY PLAN

The City Park Building Regulations were adopted on the basis of careful preparation and detailed examinations applying the prescribed requirements for methodology and content and professional regulations within the framework of negotiation and adoption procedures defined in law.



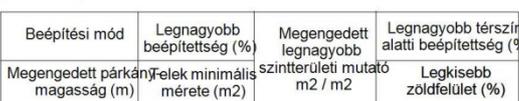
Figure 42 | The City Park Regulatory Plan

(source:

[http://budapest.hu/telepulesrendezesitervek/TSZT/VESZ_201608/20_2016.%20\(VI.%2010.\)%201.%20melleklet.pdf](http://budapest.hu/telepulesrendezesitervek/TSZT/VESZ_201608/20_2016.%20(VI.%2010.)%201.%20melleklet.pdf))

Legend for the REGULATORY PLAN

KÖTELEZŐ ÉRVÉNYŰ ELEMÉK

	Szabályozási vonal
	Feltételhez kötött szabályozási vonal
	Szabályozási elemekre vonatkozó méretek
	Építési övezet, övezet határa
	Építési övezet, övezet jele
	
	Megszüntető jel
	Építési hely
	Építési hely kizárólag térszín alatt
	Kiemelten értékes fa
	Karakterében megőrzendő fasor
	Kiemelten értékes facsoport
	Különleges rendeltetésű parkterület
	Megőrzendő karakterű, nyílt szabadterület
	Telek zöldfelületként fenntartandó része
	Tómeder állandóan, illetve időszakosan vízfelületként fenntartandó része
	Bontandó épület, építmény
	MILLFAV védelmi zónájának határa
	Közpark területén belül kialakítható felszíni parkoló határa
	Parkolóház, mélygarázs minimális vagy maximális befogadóképessége
	Gyalogos tengely
	EuroVelo kerékpáros nyomvonal
	Szabályozási terv területi hatálya

COMPULSORY ELEMENTS

Regulatory border

Regulatory border linked to conditions

Dimensions related to regulatory elements

Construction zone, zone border

Construction zone, zone designation

Construction method	Maximum development (%)	Maximum allowed floor space index m2/m2	Maximum below surface development (%)
Allowed cornice height (m)	Minimum lot size (m2)		Minimum green area(%)

Termination sign

Building site

Exclusively below surface building site

Particularly valuable tree

Row of trees whose character is to be preserved

Particularly valuable group of tree

Special purpose park area

Free, open space whose character is to be preserved

Section of a lot to be maintained as a green area

Section of the lake bed to be maintained as a water surface permanently/seasonally

Building or structure to be demolished

Border of the Millennium Underground protection zone

Border of a surface parking lot to be developed within the area of the public park

Minimum or maximum capacity of parking structures or underground parking garages

Pedestrian axis

EuroVelo bicycle path

Territorial effect of the regulatory plan

TÁJÉKOZTATÓ ELEMEK

I. Országos (Nemzetközi) művi értékvédelem

	Világörökségi helyszín területe
	Világörökségi helyszín védőövezetének határa
	Műemléki környezet
	Műemlék
	Műemlék telke
	Nemzeti emlékhely
	Régészeti lelőhely határa
	Régészeti érdekű terület határa

II. Országos és térségi táj- és természetvédelem

	Országos jelentőségű természetvédelmi terület
---	---

III. Egyéb tájékoztató elemek

	Sportterület rendeltetésű parkterület
	Játszóter rendeltetésű parkterület
	Kutyafuttató rendeltetésű parkterület
	Hidegvizes kút
	Vízbázisvédelmi terület (belső/külső)
	Jelentős helyigényű közművezeték védőterülete
	Javasolt megszüntetés
	Meglévő kerékpározásra kijelölt útvonal
	Vasútvonal védőtávolságának határa

ALAPTÉRKÉPI ELEMEK

	Telekhatár
	Helyrajzi szám
	Épület
	Támfal
	Pince
	Magassági pont (mBf.)

INFORMATIONAL ELEMENTS

I. National (international) operative asset preservation

	World heritage site territory
	World Heritage site buffer zone border
	Historic surroundings
	Historic property
	Historic property lot
	National memorial site
	Archaeological site border
	Border of an area of archaeological interest

II. National and regional landscape and nature conservation

	Nature conservation area of national significance
---	---

III. Other informational elements

	Park area for sport purposes
	Park area for playground purposes
	Park area for dog park purposes
	Water fountain
	Water basis protection area(inner/outer)
	Buffer zone for public utilities with significant need for space
	Recommended termination
	Existing designated bicycle path
	Railway buffer zone border

BASIC CARTOGRAPHIC ELEMENTS

	Lot boundary
	Land registry lot number
	Building
	Retaining wall
	Cellar
	Survey altitude point(m above sea level)

Figure 43 | Legend for the City Park Regulatory Plan

(source: [http://budapest.hu/telepulesrendezesitervek/TSZT/VESZ_201608/20_2016.%20\(VI.%201010.\)%201.%20melleklet.pdf](http://budapest.hu/telepulesrendezesitervek/TSZT/VESZ_201608/20_2016.%20(VI.%201010.)%201.%20melleklet.pdf))

REGULATORY CHARACTERISTICS OF THE CITY PARK IN THE CITY PARK BUILDING REGULATIONS

The City Park Building Regulations define the territorial units of various categories, construction zones and regulatory characteristics of zones in connection with the entire territory of the City Park.

AREAS INTENDED FOR CONSTRUCTION

Amongst the City Park Building Regulations' "areas intended for construction", the Budapest Zoo and Botanical Gardens, which is the 26th oldest of the world's 1,000 zoos, is defined by characteristics requiring renovation, while the conditions that have developed close to the historically built up areas limit expansion.

AREAS NOT INTENDED FOR CONSTRUCTION

Heroes' Square, which is part of the site, is surrounded by the green area of the City Park, which is part of the buffer zone. In this area, the already existing buildings in the territory of the park have not been designated as separate construction zones or other zones, so the prescribed regulatory characteristics must be ensured with the inclusion of every existing and planned building. The minimum prescribed green area must be 65% and the maximum amount of construction cannot be greater than 7%.

The following tables illustrate the characteristics of the "areas intended for construction":

Museum of Fine Arts:	Construction zone labeled Vi-K
Múcsarnok Art Gallery:	Construction zone labeled Vi-K
Budapest Zoo and Botanical Gardens:	Construction zone labeled K-ÁN-1 Construction zone labeled K-ÁN-2
Gundel Restaurant surroundings:	Construction zone labeled Vi-V
Budapest City Circus:	Construction zone labeled Vi-Sz

Vi - K	Szabadonálló	60 %	2,0 m ² /m ²	60 %
	K	15.000 m ²		20 %

Vi - V	Szabadonálló	50 %	1,5 m ² /m ²	50 %
	10,5 m	5.000 m ²		15 % *

Vi - Sz	Z	70 %	2,0 m ² /m ²	80 %
	20,0 m	4.500 m ²		5 % *

K-ÁN - 1	-	35 %	2,0 m ² /m ²	50 %
	20,0 m	100.000 m ²		40 %

K-ÁN - 2	Szabadonálló	40 %	1,5 m ² /m ²	45 %
	30,0 m**	5000 m ²		25 % *

* OTÉK-tól való számú eltérési engedély alapján

** jelölt helyen belül max. 40 méter az épület legmagasabb pontja

Construction method <i>Beépítési mód</i>	Maximum development (%) <i>Legnagyobb beépítettség (%)</i>	Maximum allowed floor space index m ² /m ² <i>Megengedett legnagyobb szintterületi mutató m²/m²</i>	Maximum below surface development (%) <i>Legnagyobb térszín alatti beépítettség (%)</i>
Allowed cornice height (m) <i>Megengedett párkánymagasság (m)</i>	Minimum lot size (m ²) <i>Telek minimális mérete(m²)</i>		Minimum green area (%) <i>Legkisebb zöldfelület (%)</i>

Figure 44 | Regulatory characteristics of the construction zones and their explanation (source: www.budapest.hu)

Szabadonálló = Free standing

*On the basis of the variance permit number..... from the National Town Planning and Construction Requirements

**Within the designated area the highest point of the building can be max. 40 meters

The following tables illustrate the characteristics of “areas not intended for construction”:

Heroes’ Square: Zone labeled Kb-Bk (national memorial site)

City Park: Zone labeled Z-VI (historic park)

Transportation areas:

Zone labeled KÖu-1 (Dózsa György Road)

Zone labeled KÖu-2 (Állatkerti Boulevard)

KÖu - 1	Szabadonálló	1 %	-	1 %
	-	-	-	-

KÖu - 2	Szabadonálló	1 %	-	1 %
	-	-	-	-

Z-VI	Szabadonálló	7 %	0,3 m ² /m ²	10 %
	25 m ^{***}	80.000 m ²		65 %

*** "A" és "B" jelű építési helyeken belül max. 40 méter az épület legmagasabb pontja

Kb - Bk	-	-	-	15 %
	-	15.000 m ²	-	%

Construction method <i>Beépítési mód</i>	Maximum development (%) <i>Legnagyobb beépítettség (%)</i>	Maximum allowed floor space index m ² /m ² <i>Megengedett legnagyobb szintterületi mutató m²/m²</i>	Maximum below surface development (%) <i>Legnagyobb térszín alatti beépítettség (%)</i>
Allowed cornice height (m) <i>Megengedett párkánymagasság (m)</i>	Minimum lot size (m ²) <i>Telek minimális mérete(m²)</i>		Minimum green area (%) <i>Legkisebb zöldfelület (%)</i>

Figure 45 | Regulatory characteristics of the building zones and their explanation (on the basis of Annex 2. of the City Park Building Regulations)

(source: [http://budapest.hu/telepulesrendezesitervek/TSZT/VESZ_201608/32_2014.%20\(VII.%2015.\)%20rendelet.pdf](http://budapest.hu/telepulesrendezesitervek/TSZT/VESZ_201608/32_2014.%20(VII.%2015.)%20rendelet.pdf))

Szabadonálló = Free standing

***Within the designated building areas labeled “A” and “B” the highest point of the building can be max. 40 meters.

7.4. BUILDINGS FOR THE LIGET BUDAPEST DEVELOPMENT¹⁴

Museum buildings can be found in numerous countries throughout the world as a complex museum district. Amongst others, these include the world famous museum districts of the Museumsquartier in Vienna, the Museumplein in Amsterdam, the Museuminsel in Berlin, the National Mall in Washington D.C. and Millennium Park in Chicago. These cultural districts have significant attraction to tourists and ensure demonstrably higher number of tourists to the museums and other cultural or commercial establishments than when similar institutions (with collections) are spread throughout the city.

Liget Budapest Project aimed at the complex development and revitalization of the City Park five new museums will be given homes on the currently paved surfaces of the park or on the sites of existing institutions within the park that are destined for demolition. The five new buildings – the Museum of Ethnography, the House of Hungarian Music, the New National Gallery, the Városliget Theater and the BIODOME to be built on the area of the Zoo and Botanical Gardens – along with the institutions that have been operating in the park for more than a century will create a genuine City Park where the fine arts, architecture, ethnography, music and theater together await visitors.



Figure 46 | Bird's eye view of the location of the planned new buildings from Andrassy Avenue looking east (source: Városliget Zrt.)

The Városliget Zrt. in conjunction with the Museum of Fine Arts arranged an open and – for the first time in more than a century – international design competition for the new buildings.

14 Source: Városliget Zrt.

The judging has taken place with the participation of Hungarian and foreign experts in museums and architecture, paying particular attention during the process to the individuality of the designs, contemporary architectural demands and the manner in which the buildings will contribute to Budapest's cultural heritage.

In addition to the architectural quality and solutions of the prospective museum, the jury will evaluate the technological and functional concepts characterizing the designs (for example expected visitor enjoyment and museum technology solutions), the sustainability of the planned building (energy efficiency and ecology), its dialogue in relation to the surroundings (amongst other factors, its integration into the cityscape, green space considerations, its relationship with the City Park and the building's accessibility) and the expected costs (both in relation to construction and maintenance). In addition to the architectural design competition, the landscape architectural competition must be highlighted also, which will be the basis for the complex renovation of the entire park.

Design for the renovation of the City Park (design: Garten Studio Kft. Táj- és Kertépítész Iroda)

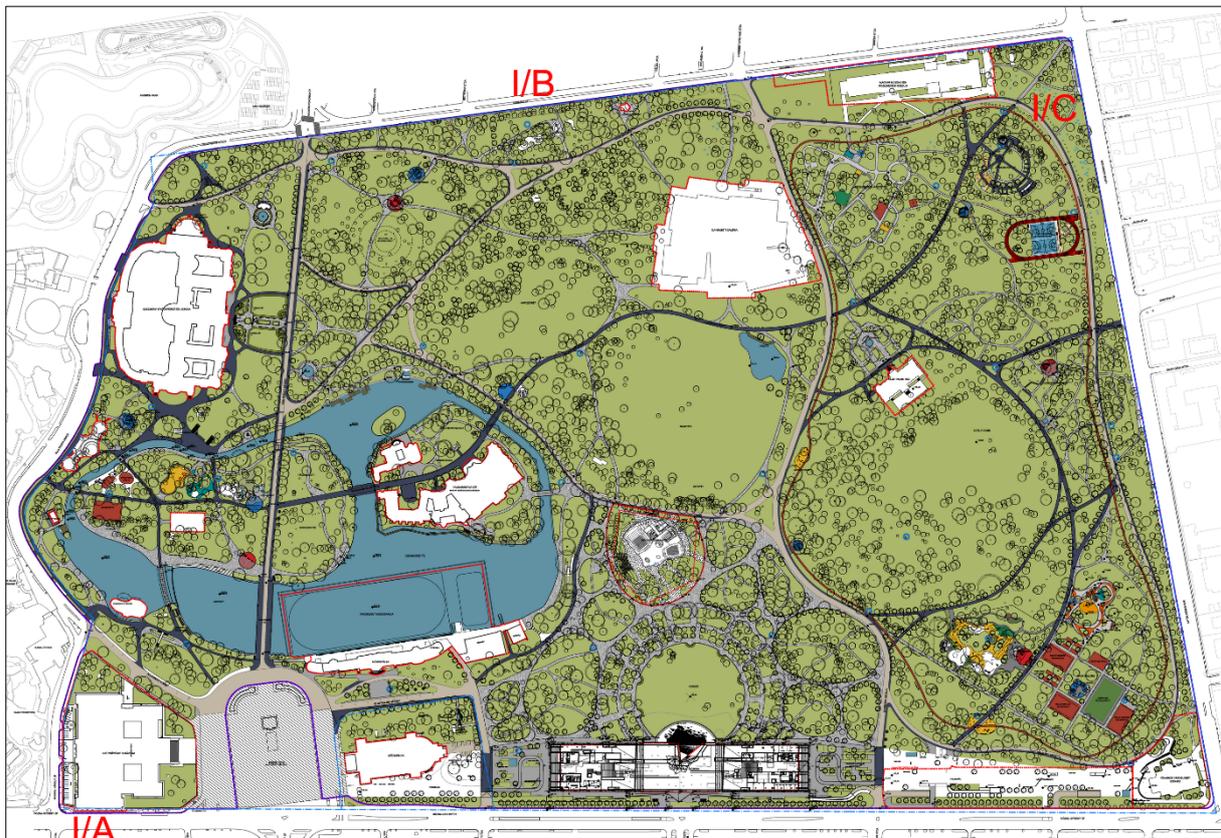


Figure 47 | Design of the City Park (source: Városliget Zrt. 2017.)

(source: Városliget Zrt.)

SUMMARY OF THE PARK HISTORY SCIENTIFIC DOCUMENTATION OF THE CITY PARK¹⁵

Scientific documentation processed the elements and correlations determining from a historical aspect and connected with the establishment of the park, tracking the historical changes from the 18th century to today. The studies extend to changes in area, processing in detail changes to the buildings, structures, road network, water supply and plant stock, as well as other interventions. Based on the historical inventory, the further objectives were the following:

- determination of the historical plant stock (inventory),
- identification of historical garden structural elements.

Following analysis of the problems, the documentation also formulates the principal aspects of the proposals.



Figure 48 | Green areas and plant stock of the City Park

The principal proposals highlighting the value of the City Park as a historical garden can be summarized as follows:

- 1. revitalization of the City Park and Zoo area as a historical garden**
- 2. designation of trees with historical significance in the City Park as being highly protected**
- 3. presentation of the City Park as a type of open-air garden history museum.**

¹⁵ authors: Zsolt Szécsi (Örökségvédelmi Tervező és Szolgáltató Kft.) - Ildikó Ombódi (Tusculanum Studio Kft.) – Rita Remeczki (Open Air Design Kft.)



Figure 49 | Examination of the City Park plant stock

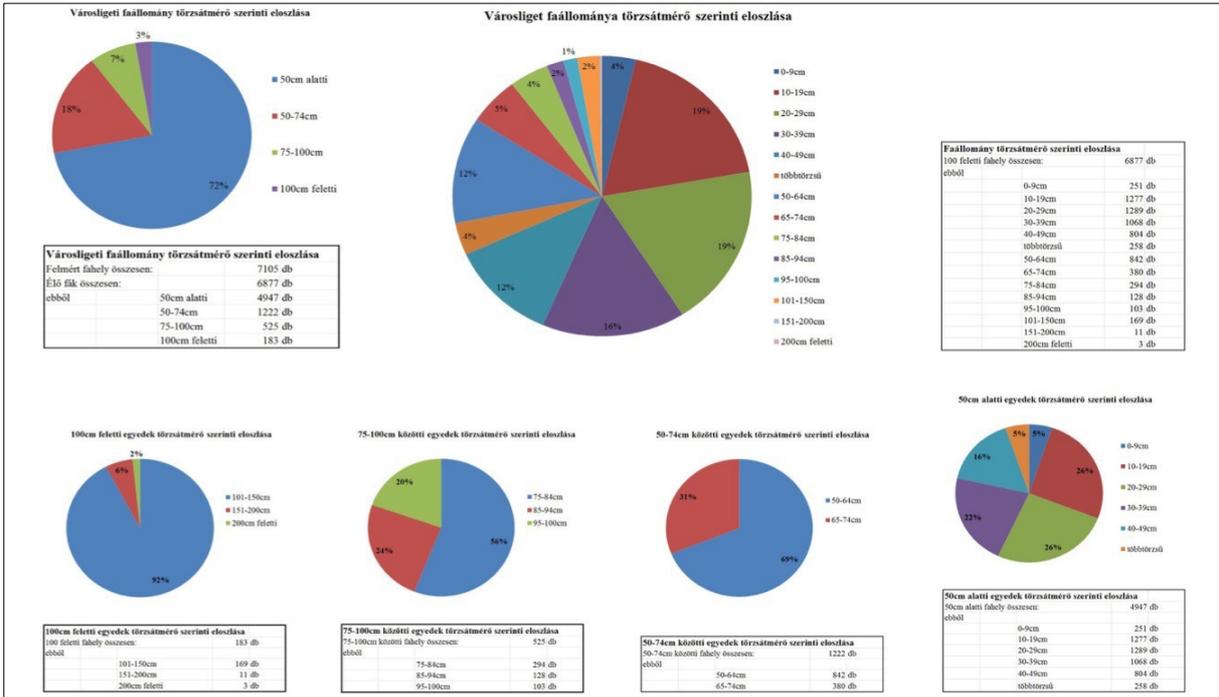


Figure 50 | Examination of the City Park plant stock and summary of the results

ARCHITECTURAL PLANS OF THE NEW BUILDINGS

Museum of Ethnography (design: Napur Architect Kft.)

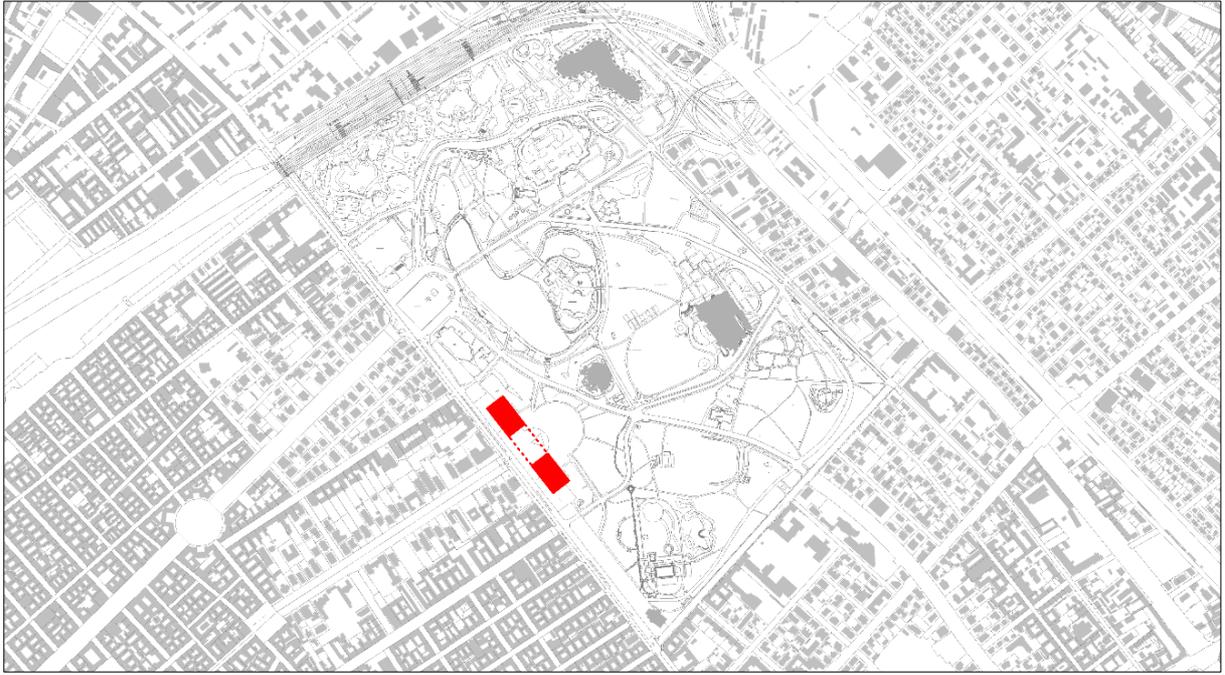


Figure 51 | Location of the planned Museum of Ethnography



Figure 52 | Bird's eye view of the Museum of Ethnography

(source: Városliget Zrt.)

House of Hungarian Music (design: Sou Fujimoto Architects)

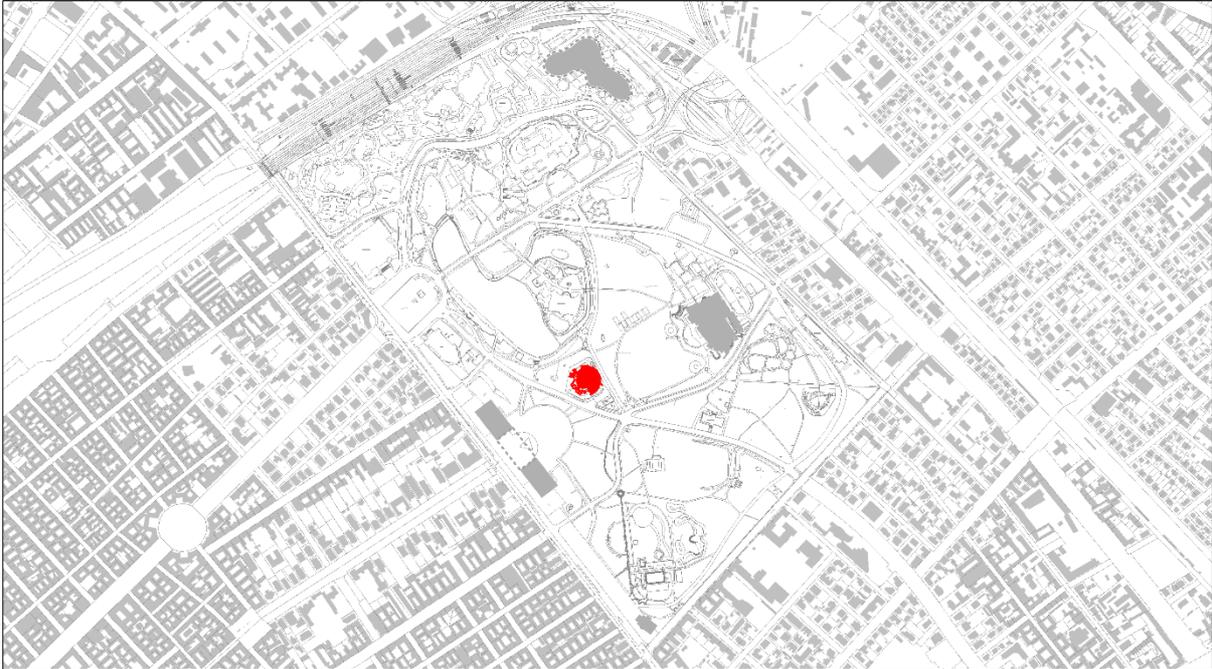


Figure 53 | Location of the planned House of Hungarian Music



Figure 54 | Proposed design of the House of Hungarian Music

New National Gallery (design: Sejima and Nishizawa and Associates (SANAA))

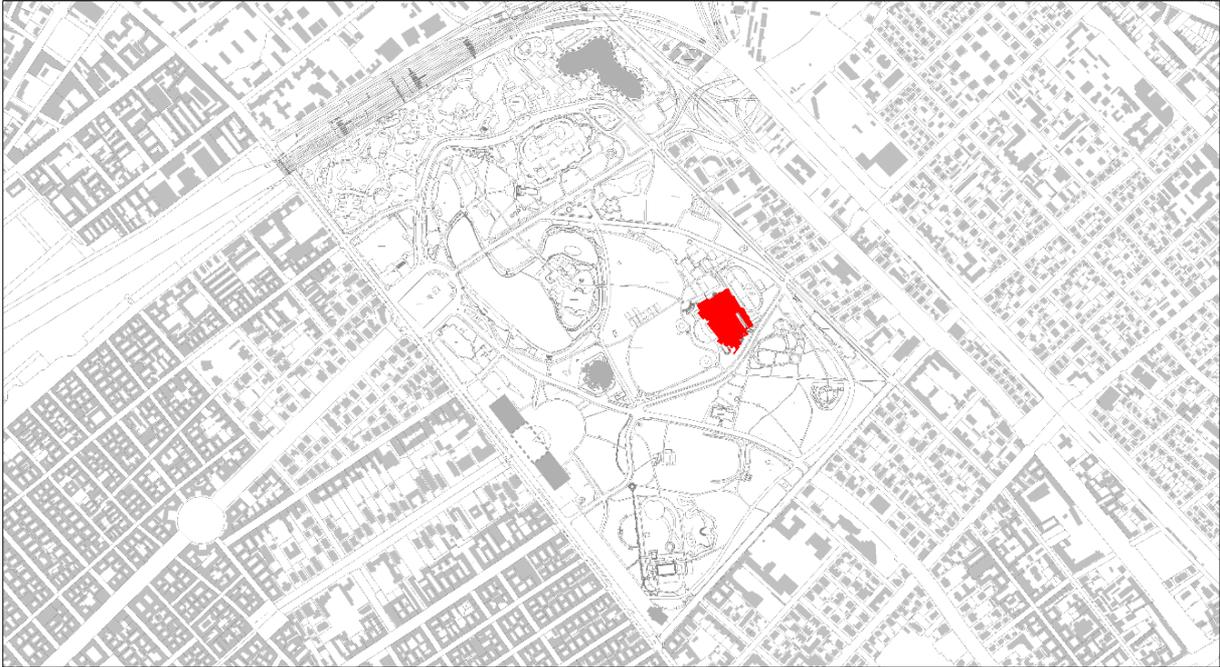


Figure 55 | Location of the planned New National Gallery



Figure 56 | Proposed design of the New National Gallery

(source: Városliget Zrt.)

Városliget Theater (design: Narmer Bt.)

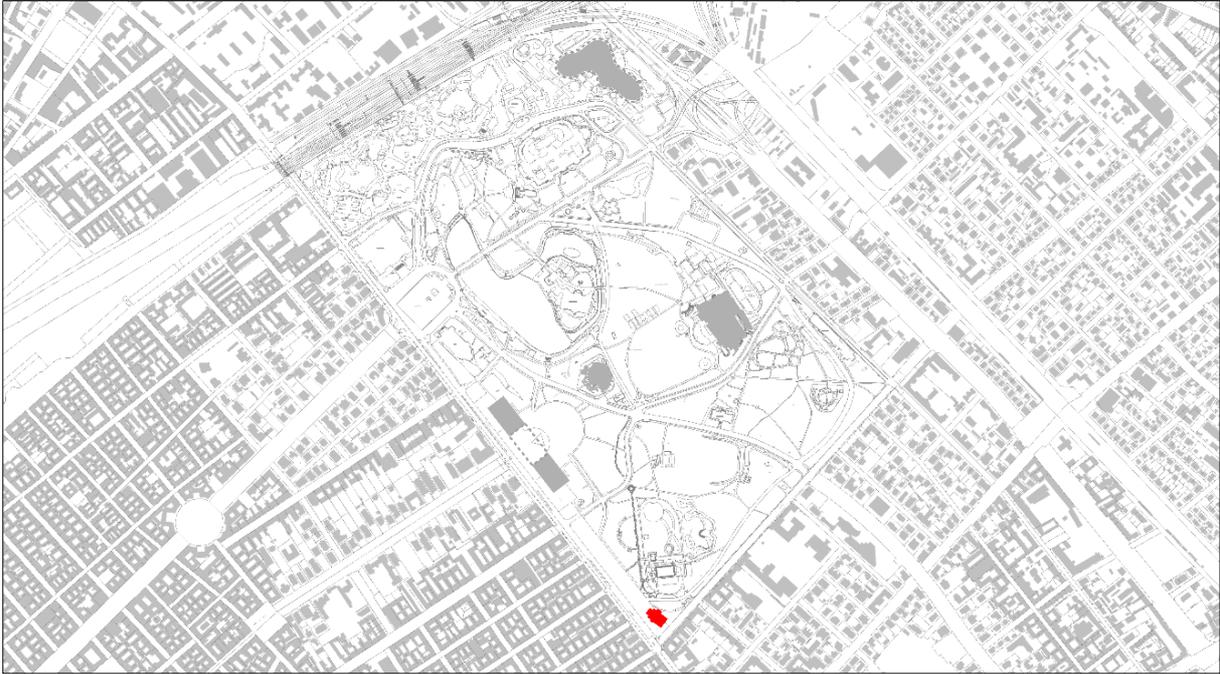


Figure 57 | Location of the planned Városliget Theater



Figure 58 | Proposed design of the Városliget Theater

(source: Városliget Zrt.)

Budapest Zoo and Botanical Gardens - BIODOME (design: Mérték Építészeti Stúdió Kft.)

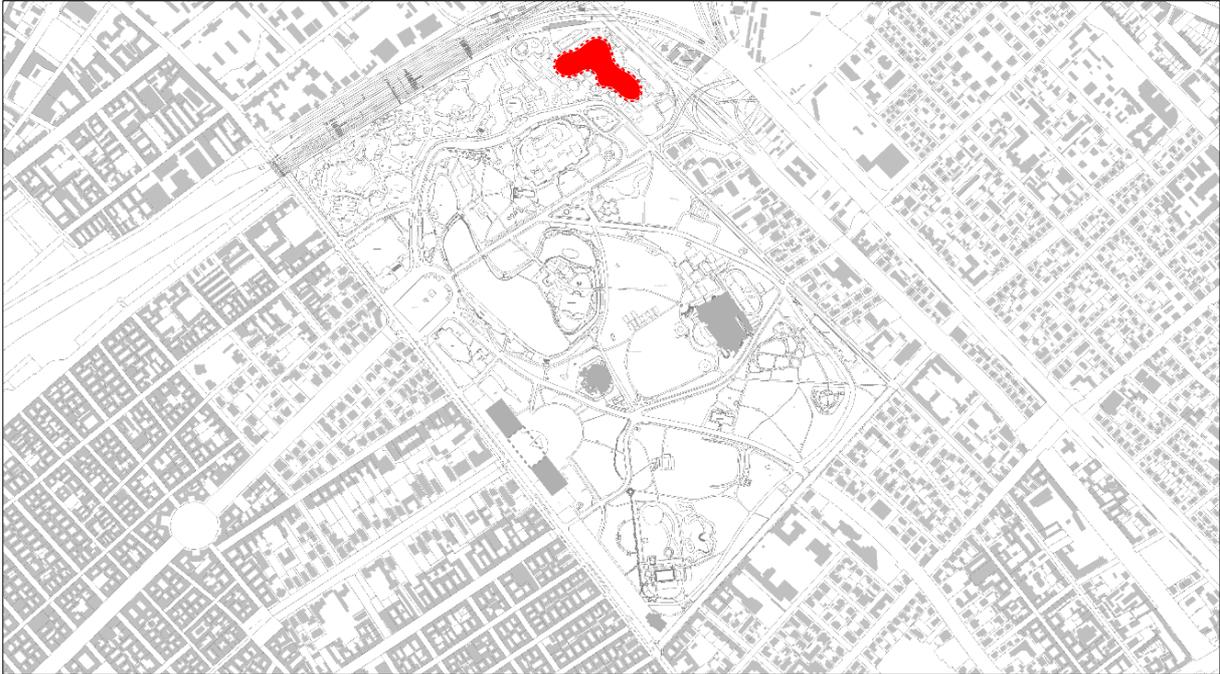


Figure 59 | Location of the planned BIODOME



Figure 60 | Proposed design of the Biodome (Budapest Zoo and Botanical Gardens) (source: Városliget Zrt.)

8. ESTIMATED IMPACT OF THE PLANNED INTERVENTIONS AND THEIR EVALUATION

8.1. THE INTERVENTIONS

The planned interventions of the Liget Budapest Project will produce an impact in numerous aspects on the urban environment, and within this the World Heritage site and its buffer zone.

The expected impact will have an effect on the environment in the short, medium and long terms (see: Section 8.3.).

The planned interventions are as follows:

1. the construction of new buildings and an increase in developed areas
2. the expansion of the City Park's green space
3. the elimination or transformation of functions that are noisy or heavily burden the environment
4. the elimination of transit traffic on Kós Károly Promenade
5. the elimination of the P+R parking lots along Dózsa György Road
6. the relocation of the Dózsa György Road P+R parking lots and the restriction of parking
7. the consolidation of the territory of the Budapest Zoo and Botanical Gardens with the territory of the former Amusement Park
8. the dissolution of the former Dózsa György Road "parade square"
9. the demolition of the Petőfi Hall building and the paved surroundings of the building^{16 17}
10. the demolition of the HUNGEXPO buildings
11. the reduction of the currently paved surfaces of the City Park
12. the parameters of the adopted City Park Building Regulations
13. the radical transformation of the transportation system
14. bicycle paths in the park
15. public transportation in the park
16. the greater burden from increased visitorship to the City Park
17. the spatial distribution of the visitors to the City Park

¹⁶ "At the end of the 1800s the City Park became the site of large exhibitions. In 1885 it was here that the predecessor of the present-day Petőfi Hall, the Hall of Industry was erected according to the designs of János Kohn (who later designed the iron framework of the Schlick Factory) and Christian Ulrich (who was a teacher at the Technical University and the designer of the Ferencváros Grain Elevator, among other things). The ground area of the Neo-renaissance style building made of brick, stone, iron and glass was more than 14,000 square meters!" (source: <http://hg.hu/cikkek/varos/11111-meddig-mehetunk-meg-el-a-pecsaba>)

¹⁷ Source: City Park Building Regulations, Conditions Assessment, working section on conditions evaluation, March 2014, page 67 (source: www.budapest.hu)

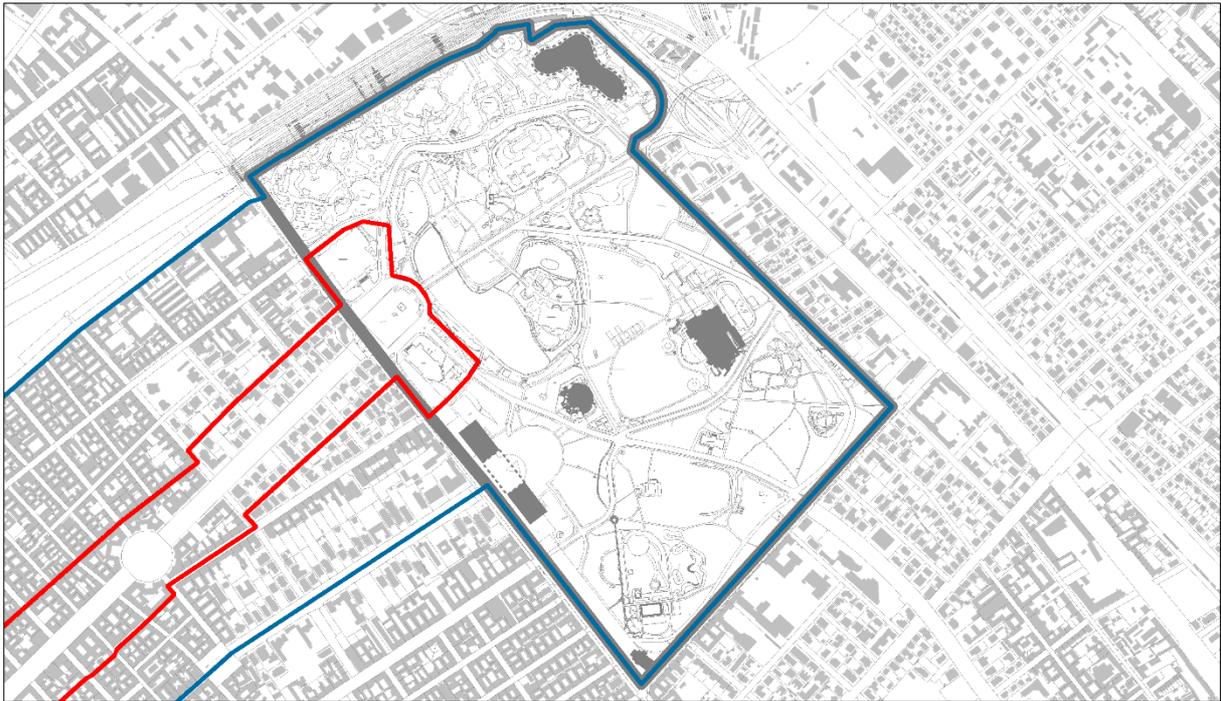


Figure 61 | The City Park with the site and the buffer zone

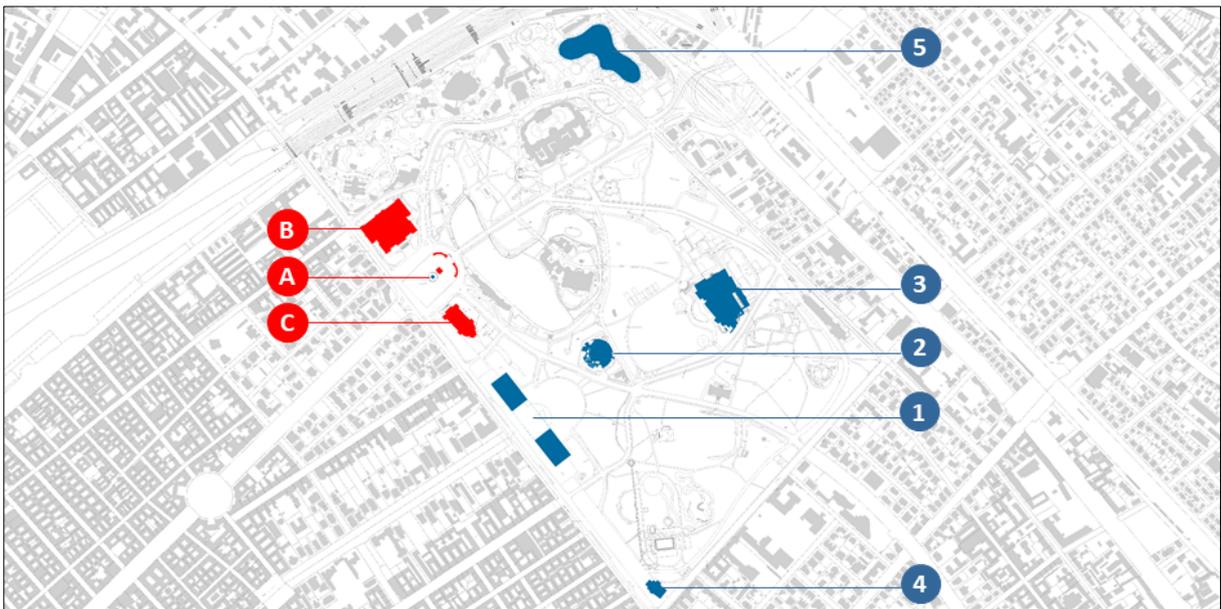


Figure 62 | The City Park with the historic properties of the World Heritage site and the planned buildings
 A = Millennium Memorial, B = Museum of Fine Arts, C = Múcsarnok Art Gallery, 1 = Museum of Ethnography, 2 = House of Hungarian Music, 3 = New National Gallery, 4 = Városliget Theater, 5 = Biodome (Budapest Zoo and Botanical Gardens)

It can be established that no new buildings will be constructed in the immediate vicinity of the Millennium Monument. The planned green space between the planned buildings and the Múcsarnok Art Gallery ensures adequate separation. The new buildings will be located approximately 320, 440, 690, 700 and 1000 meters from the World Heritage site (from the center of the core area), and therefore the green spaces, plant stock created along the planned promenade along Dózsa György Road provide adequate visual separation between them.

INTERVENTIONS, RESULTS AND EFFECTS

INTERVENTION	RESULT / EFFECT													
	Reduction in environmental burden	Improvement in environmental condition	Improvement in environmental quality	Upgrade: park reconstruction	Upgrade: traffic transformation	Density: change in function	Density: increased green space	Spatially differentiated visitorship	Reconstruction of built up areas	Reduction of paved surfaces	Development: demolition of buildings	Reduction of parking spaces	Maximum developed area (7%)	Minimum green space (65%)
1. Construction of new buildings, increase in developed areas			+			+		+	+	+	+			
2. Expansion of the green spaces of the City Park	+	+	+	+			+	+						+
3. Elimination or transformation of functions that are noisy or heavily burden the environment		+	+						+					
4. Elimination of transit traffic on Kós Károly Promenade	+	+	+		+									
5. Elimination of the P+R parking lots along Dózsa György Road	+	+	+		+					+		+		
6. Relocation of the Dózsa György Road P+R parking lots and the restriction of parking	+	+	+		+					+		+		
7. Consolidation of the territory of the Budapest Zoo and Botanical Gardens with the territory of the former Amusement Park			+			+		+						
8. Dissolution of the former Dózsa György Road "parade square"	+	+	+		+					+		+		
9. Demolition of the Petőfi Hall building and the paved surroundings of the building			+						+	+	+		+	
10. Demolition of the HUNGEXPO buildings			+						+	+	+		+	
11. Reduction of the currently paved surfaces of the City Park		+	+		+		+			+		+		+
12. City Park becomes regulated for building rights	+	+	+	+	+	+	+	+		+	+	+	+	+
13. Radical transformation of the transportation system	+	+		+	+			+		+		+		
14. Bicycle paths in the park			+	+	+			+						
15. Public transportation in the park	+	+	+	+	+			+				+		
16. Increased visitorship to the City Park						+	+	+						
17. Spatial distribution and reorganization of the visitors to the City Park			+	+		+	+	+	+	+		+		

Table 6 | Interventions, results and effects

NOTE: In many cases the above interventions and their results overlap with one another, therefore hereinafter they will be dealt with separately on the basis of the results and characteristic effects of the interventions.

THE CHARACTERISTICS OF THE INTERVENTIONS AND THEIR IMPACT

INTERVENTION	IMPACT	CHARACTERISTICS OF THE IMPACT					
		CHARACTER		TIME PERIOD		ORIGIN	
		FAVORABLE	UNFAVORABLE	PRESENT	LONG-TERM	INTERNAL	EXTERNAL
1. Construction of new buildings, increase in developed areas	can be implemented within the areas currently built on and paved areas and within the permitted restrictions		-		+	+	
2. Expansion of the green spaces of the City Park	the green space increase from 58% to 65% will reduce density and improve the environment	+			+	+	
3. Elimination or transformation of functions that are noisy or heavily burden the environment	reduces environmental burdens and improves the condition of the environment	+			+	+	
4. Elimination of transit traffic on Kós Károly Promenade	reduces environmental burdens and improves the condition of the environment	+			+	+	+
5. Elimination of the P+R parking lots along Dózsa György Road	reduces environmental burdens and improves the condition of the environment	+			+	+	+
6. Relocation of the Dózsa György Road P+R parking lots and the restriction of parking	reduces environmental burdens and improves the condition of the environment , but reduces the number of available parking spaces	+	-		+		+
7. Consolidation of the territory of the Budapest Zoo and Botanical Gardens with the territory of the former Amusement Park	improves the quality of the environment and ensures a richer number of functions	+		+			+
8. Dissolution of the former Dózsa György Road "parade square"	reduces environmental burdens and improves the condition of the environment	+			+	+	
9. Demolition of the Petőfi Hall building and the paved surroundings of the building	reduces environmental burdens and improves the condition of the environment	+			+	+	
10. Demolition of the HUNGEXPO buildings	improves the quality of the environment	+			+	+	
11. Reduction of the currently paved surfaces of the City Park	reduces environmental burdens and improves the condition of the environment	+			+	+	
12. City Park becomes regulated for building rights	guarantees the maximum parameters for buildings to be constructed and the minimum parameters for green space	+		+			+
13. Radical transformation of the transportation system	reduces environmental burdens and improves the condition of the environment	+			+	+	+

INTERVENTION	IMPACT	CHARACTERISTICS OF THE IMPACT					
		CHARACTER		TIME PERIOD		ORIGIN	
		FAVORABLE	UNFAVORABLE	PRESENT	LONG-TERM	INTERNAL	EXTERNAL
14. Bicycle paths in the park	reduces environmental burdens and improves the condition of the environment	+			+	+	
15. Public transportation in the park	reduces environmental burdens and improves the condition of the environment	+			+	+	+
16. Increased visitorship to the City Park	Increases burdens, but with proper development can be spatially differentiated	+	-		+	+	+
17. Spatial distribution of the visitors to the City Park	the development of the park facilitates the improvement of spatial distribution and more uniform burdening	+			+	+	+

Table 7 | The characteristics of the interventions and their impact

Notes:

- In evaluating the character of the impact we employed the distinction of favorable (+) and unfavorable (-). In the summary, where differing assessments appear, the character of the impact was taken into account in accordance with this, in a weighted manner, (see: table 11: The assessment of the impact of the interventions)
- For the time period of the impact, the interventions that are underway have consequences that can be currently detected, while future interventions suggest long term consequences,
- The origin of the impact differentiates those that can be influenced during the implementation of the Liget Budapest Project (internal) and those that are not within the realm of influence of the Liget Budapest Project (external).

8.2. ATTRIBUTES THAT DETERMINE THE OUTSTANDING UNIVERSAL VALUE THAT BEAR THE IMPACT

The attributes in the site (the Heroes' Square ensemble) and in the buffer zone that bear the impact are the following:

VALUE	IMPACT BEARING ATTRIBUTE	SITE	BUFFER ZONE
CULTURAL	See: architectural attributes		
SCIENTIFIC, ENGINEERING	Millennium Underground Railway		
	Andrássy Avenue	+	+
	Buildings on Andrássy Avenue		
URBAN DESIGN	Andrássy Avenue as a traffic route		+
	Underground Railway		
	Andrássy Avenue	+	+
	City Park		
	Buildings of Heroes' Square	+	+
	Millennium Monument		
	Millennium Underground Railway	+	+
	Street network, public spaces	+	+
	System of lots	+	+
	Development, stock of buildings	+	+
	Street pavement, public objects	+	+
ARCHITECTURAL AND AESTHETIC	Budapest Zoo and Botanical Gardens		+
	<i>(1866, remodeling: Kornél Neuschloss, Károly Kós, Dezső Zrumeczky, Károly Ráde and Keresztély Ilsemann 1912)</i>		
	Műcsarnok Art Gallery (new)	+	
	<i>(Albert Schickedanz and Fülöp Ferenc Herzog, 1896)</i>		

VALUE	IMPACT BEARING ATTRIBUTE	SITE	BUFFER ZONE
CONTINUATION OF ARCHITECTURAL AND AESTHETIC	Museum of Fine Arts <i>(Albert Schickedanz Fülöp Ferenc Herzog, 1906)</i>	+	
	Millennium Monument <i>(Albert Schickedanz, 1906, sculptor: György Zala)</i>	+	
	Memorial Stone for Hungarian Heroes <i>(Dedication of the memorial, 1929, reconstruction: Béla Gebhardt 1956, reconstruction 2001)</i>	+	
	Vajdahunyad Castle <i>(historical building ensemble) (Ignác Alpár, 1896, reconstructed: 1908.)</i>		+
GARDEN AND LANDSCAPE ARCHITECTURE	The history of the City Park and the park's continuous transformation following the demands of the city		+
ASSOCIATIVE	Section of Hungary's capital of outstanding importance		
	Heroes' Square ensemble	+	
	National Memorial Site		
	Numerous foreign consulates and social and political organizations are found in the buildings of the area		+
	the area is a highlighted tourist destination and a domestic and international economic factor in tourism	+	+

Table 8 | The impact bearing attributes

8.3. VISUAL ISSUES

ANDRÁSSY AVENUE AS A VISUAL AXIS

The examined portion of the World Heritage site is an integral part of the whole of Andrassy Avenue, an ensemble that closes the axis of the avenue and the city. In accordance with this the linearity of the avenue is a key visual factor.



Figure 63 | Andrassy Avenue and the Millennium Monument (source: andrassy-ut-hosok-tere-2188-www.futas.net.jpg)

HEROES' SQUARE BUILDING ENSEMBLE heroes' square building ensemble

The Heroes' Square building ensemble is located at the intersection of Andrassy Avenue and the straight path of Dózsa György Road, which borders the City Park. The composition of the ensemble is symmetrical in character, but does not exhibit perfect symmetry. The Millennium Monument and the paved space in front of it follow the axis of Andrassy Avenue consistently. The building of the Múcsarnok Art Gallery was constructed perpendicular to this axis. Opposite this, the Museum of Fine Arts conforms to the line of Dózsa György Road, making Heroes' Square asymmetrical. Another point of interest is that the axis of Kós Károly Promenade that continues Andrassy Avenue past the Millennium Monument also follows a differing structural principle. With this special composition the Heroes' Square ensemble terminates the visual axis of Andrassy Avenue.



Figure 64 | Heroes' Square (source: Városliget Zrt.)

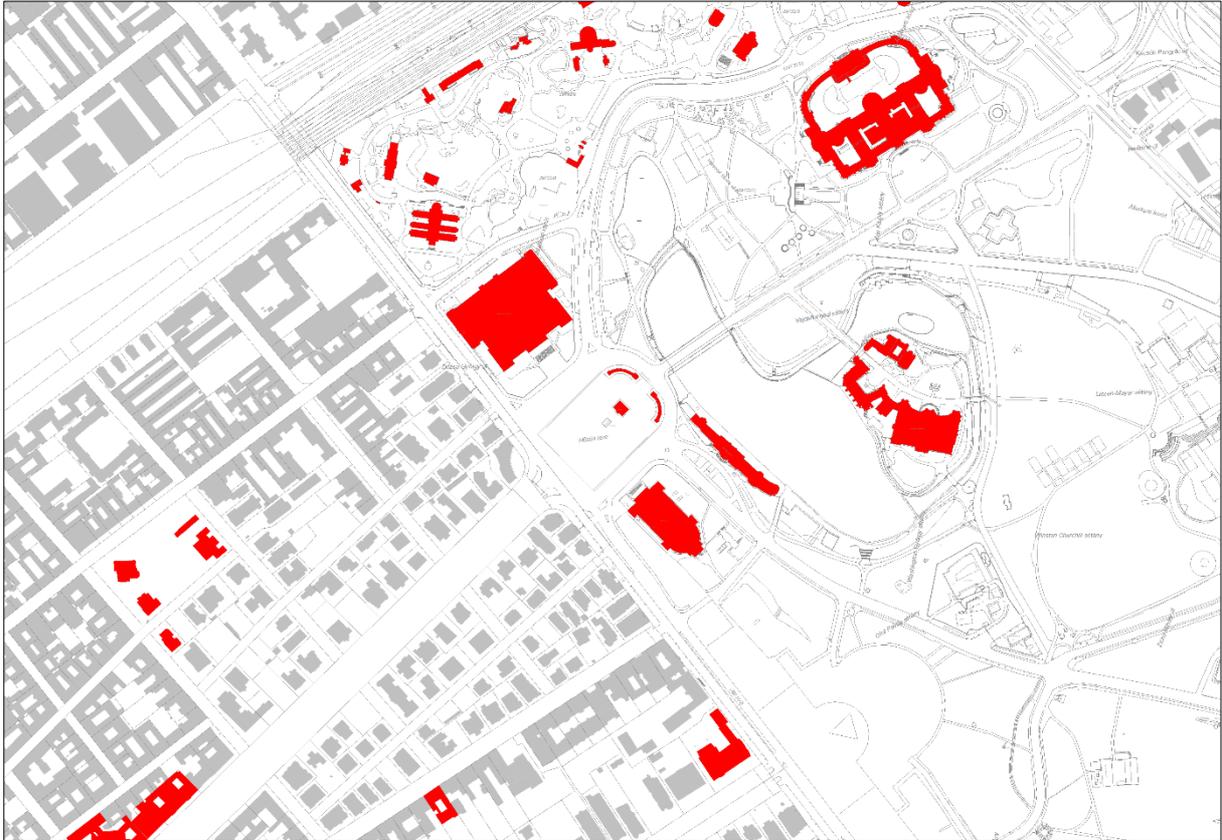


Figure 65 | Historical monuments in the World Heritage site



Figure 66 | The visual axis of Kós Károly Promenade

The visual axis of Kós Károly Promenade essentially focuses on the visual center of the Millennium Monument.

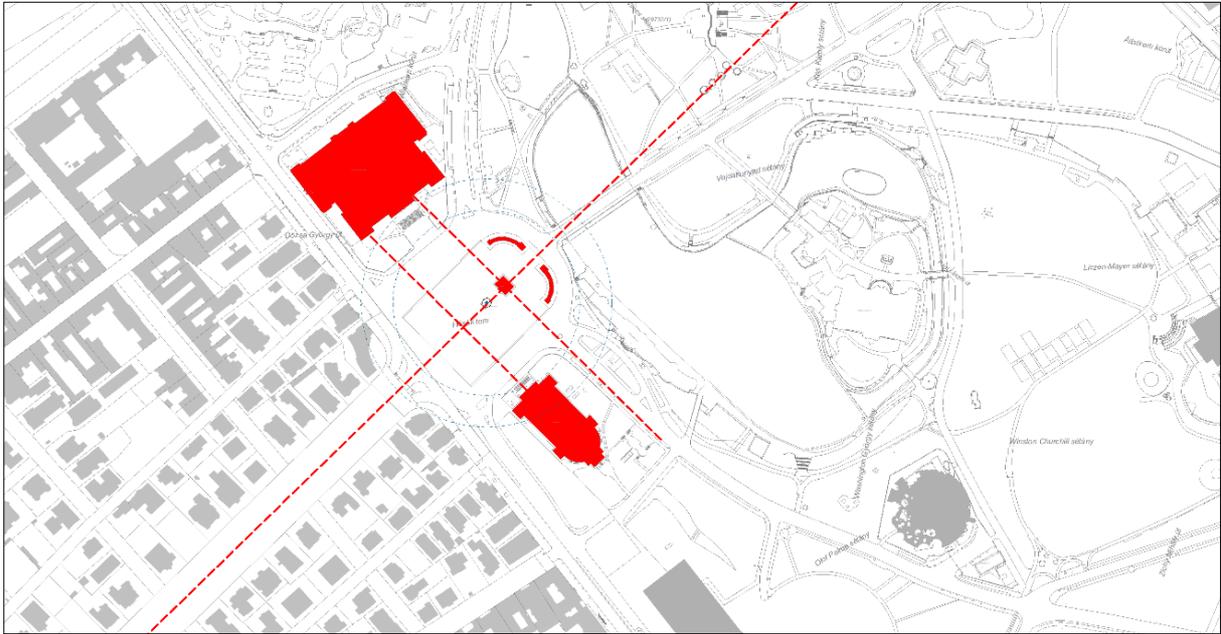


Figure 67 | The composition of the Heroes' Square ensemble I

The composition of the Heroes' Square ensemble is not entirely symmetrical; the symmetrical axis of one of the ensemble's main elements, the building of the Múcsarnok Art Gallery, is perpendicular to Andrassy Avenue, so it conforms functionally to the composition terminating Andrassy Avenue.

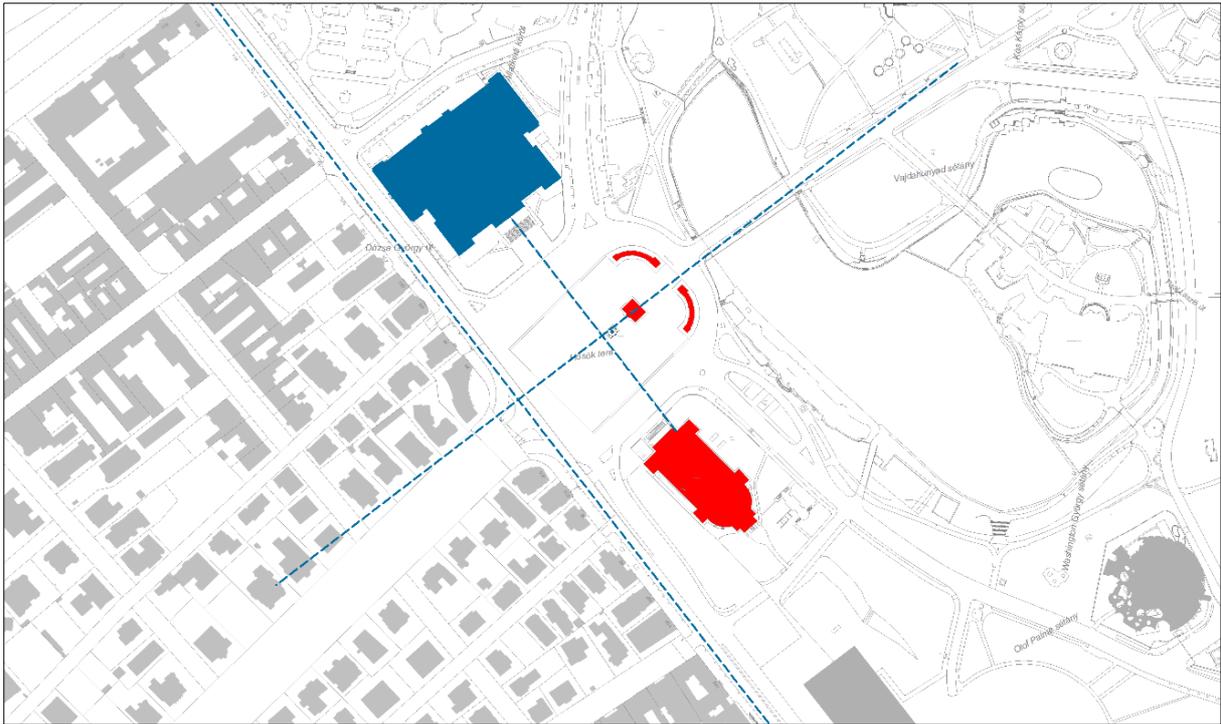


Figure 68 | The composition of the Heroes' Square ensemble II

The composition of the Heroes' Square ensemble is not entirely symmetrical; the symmetrical axis of one of the ensemble's main elements, the building of the Museum of Fine Arts is parallel to Dózsa György Road, so it differs from the visual axis of Andrassy Avenue. In accordance with this, the symmetrical axes of the Múcsarnok Art Gallery and the Museum of Fine Arts differ from one another.

VISUAL IMPACT OF THE NEW MUSEUMS PLANNED WITHIN THE CONTEXT OF THE LIGET BUDAPEST PROJECT

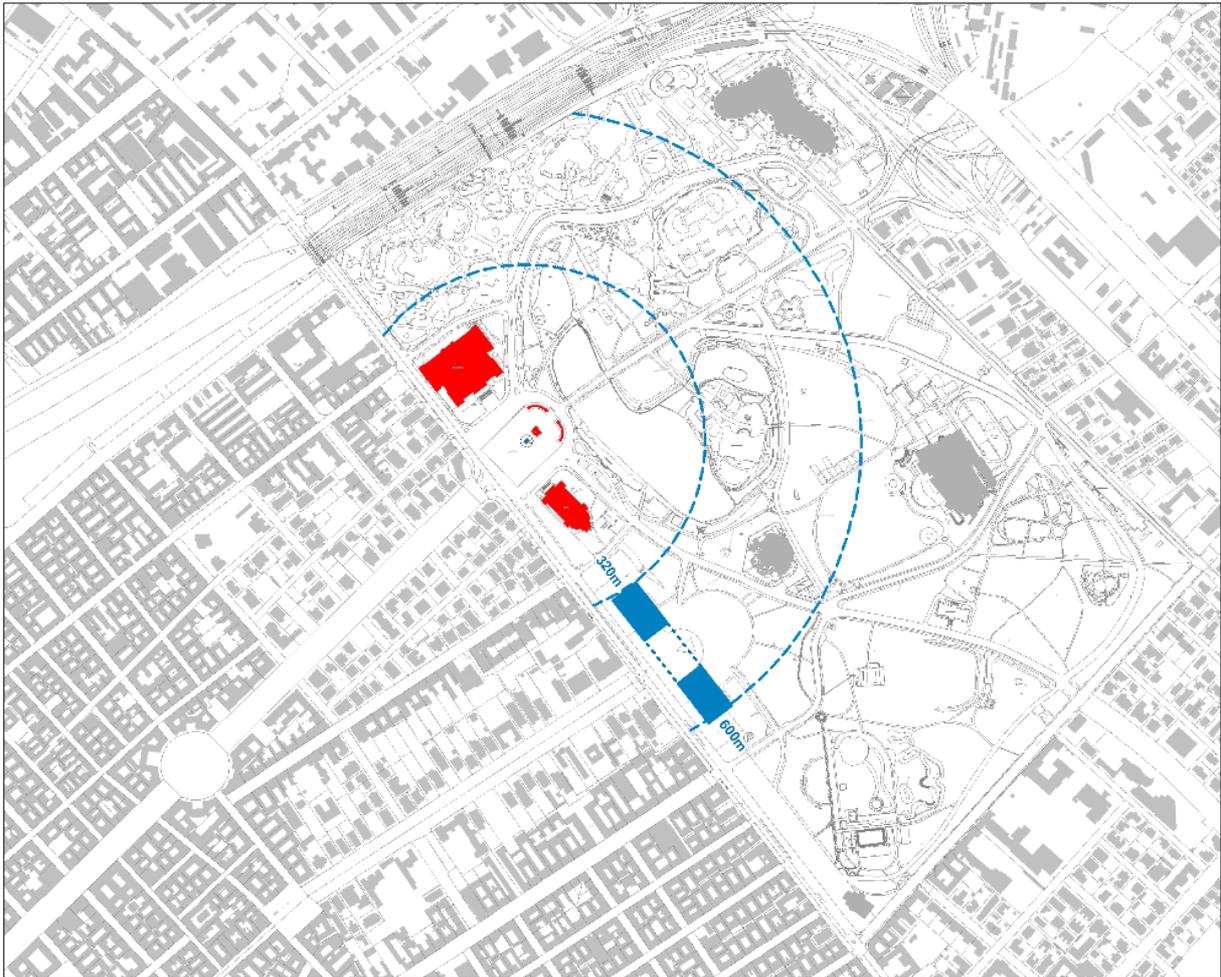


Figure 69 | The Museum of Ethnography and core area of the World Heritage site

According to the recommendation of the winning entry of the design competition for the Museum of Ethnography (Napur Architect Kft.) the distance of the building from the center of the Millennium Monument – in accordance with the construction sites designated in the City Park Building Regulations – will be approximately 320 meters. The minimum distance between the Múcsarnok Art Gallery and the planned museum is also more than 125 meters. The building will be set back from the edge of Dózsa György Road along the line of the Múcsarnok Art Gallery, following its axis perpendicular to the Museum of Fine Arts and Andrassy Avenue. Between the planned building and Múcsarnok Art Gallery about 125 meters of park-like green space with trees can take shape.

The building of the Museum of Ethnography follows the building line of the Museum of Fine Arts, maintaining a distance of more than 50 meters from the street front façades on the southwestern side of Dózsa György Road (the distance between the Museum of Fine Arts and the street front façades is just 30-32 meters).

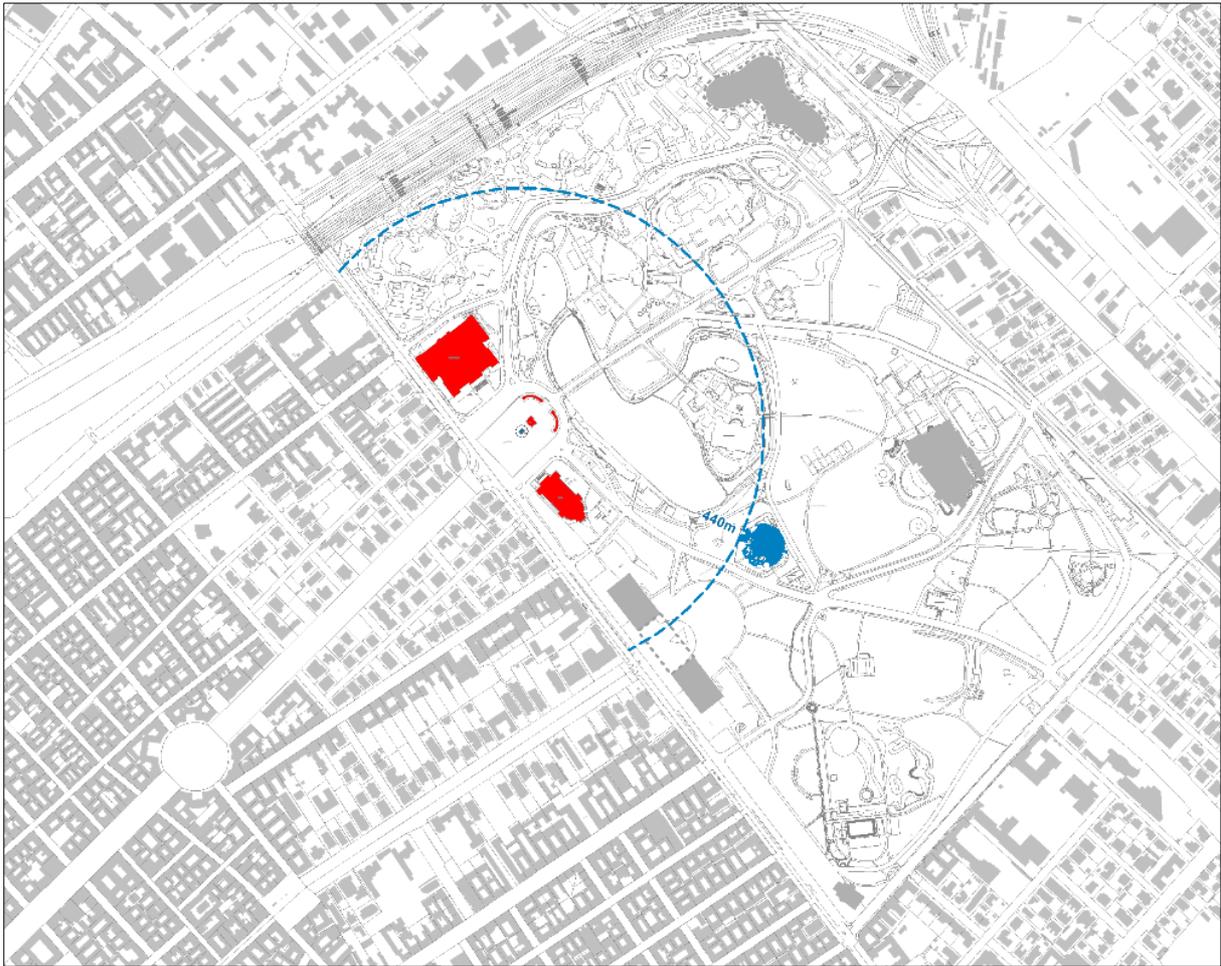


Figure 70 | The House of Hungarian Music (Sou Fujimoto Architects) and core area of the World Heritage site

According to the recommendation of the winning competition entry for the arrangement of the House of Hungarian Music (Sou Fujimoto Architects), the distance of the building from the center of the Millennium Monument – in accordance with the City Park Building Regulations – will be approximately 440 meters.

This new building that will be surrounded by green space will be located on the site encompassed by the HUNGEXPO buildings and their courtyard.



Figure 71 | The New National Gallery and core area of the World Heritage site

According to the recommendation of the winning competition entry for the arrangement of the New National Gallery, the distance of the building from the center of the Millennium Monument – in accordance with the construction sites designated in the City Park Building Regulations – will be approximately 700 meters.



Figure 72 | The Városliget Theater and core area of the World Heritage site

The Városliget Theater is the reconstruction of an earlier building that stood on the site but was demolished.

The building would be located approximately 1000 meters from the center of the core area of the World Heritage site. The small scale public building defines the meeting point of the urban streets (Dózsa György Road, Ajtósi Dürer Lane, István Street) and the park, while allowing a view onto the park.



Figure 73 | The planned BIODOME on the extended area of the Budapest Zoo and Botanical Gardens and the core area of the World Heritage site

In conclusion it can be established that the new buildings planned in the Liget Budapest Project will be located to a considerable distance from the World Heritage site (the Heroes' Square ensemble). The planned buildings will be located at a distance of between 320 and 1000 meters from the World Heritage site (the center of the core area), so the green spaces established between them along the planned promenade on Dózsa György Road will ensure a favorable visual distribution, avoiding the urban, visually closed development of Dózsa György Road, and in the course of the establishment of the Museum of Ethnography the effort towards openness appears as well, and at the same time, the formation of the mass of the building shapes a space and creates a gateway to the park in the main visual direction planned by Nebbien along the axis of the City Park Avenue.

Therefore, the visual impact of the new buildings on the Heroes' Square and Andrassy Avenue is not significant.

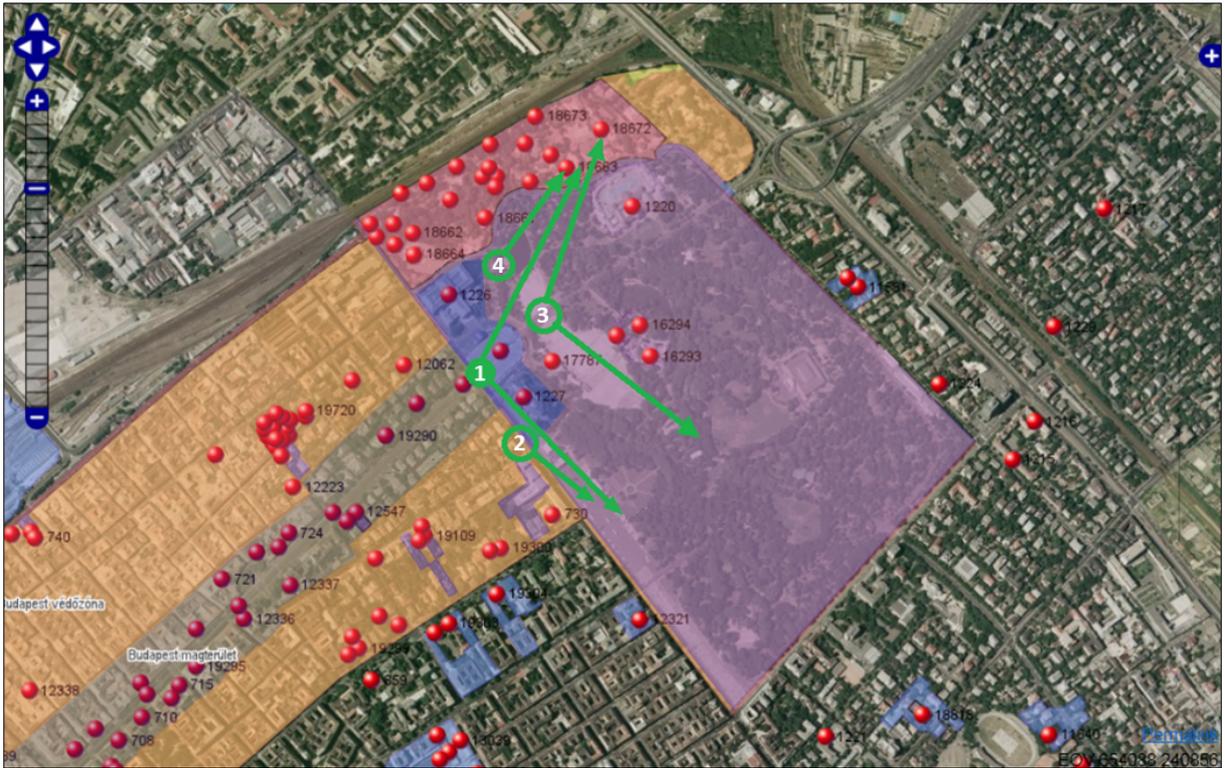


Figure 74 | Site plan of the view points

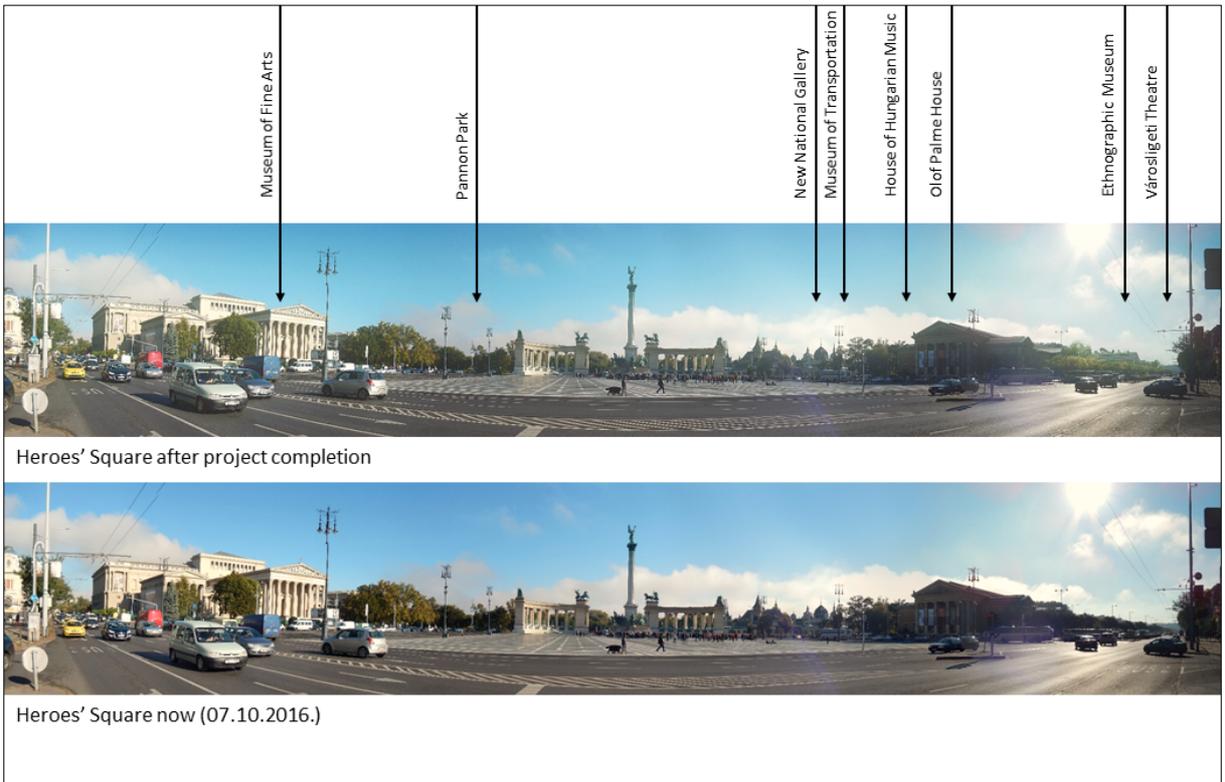


Figure 75 | Visibility analysis of the new buildings

(source: Városliget Zrt.)

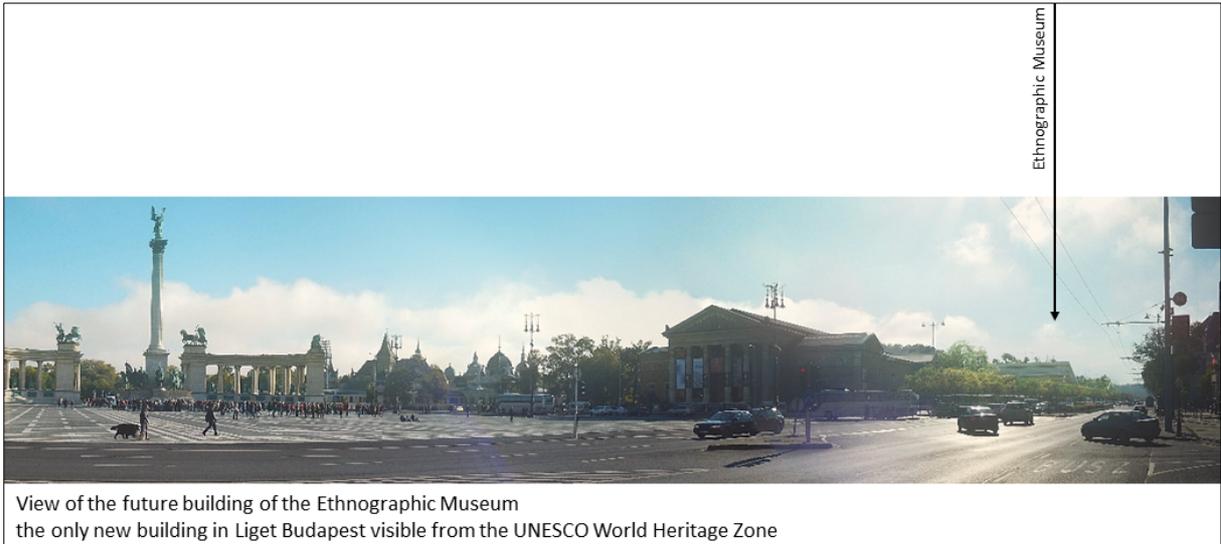


Figure 76 | Visibility analysis of the new buildings

(source: Városliget Zrt.)



Figure 77 | Visibility analysis of the new buildings | Heroes' Square after completion

(source: Városliget Zrt.)



Figure 78 | Visibility analysis of the new buildings | Heroes' Square after completion

(source: Városliget Zrt.)



Figure 79 | Visibility analysis of the new buildings | Heroes' Square after completion

(source: Városliget Zrt.)



View from the lake bridge southeast with vegetation



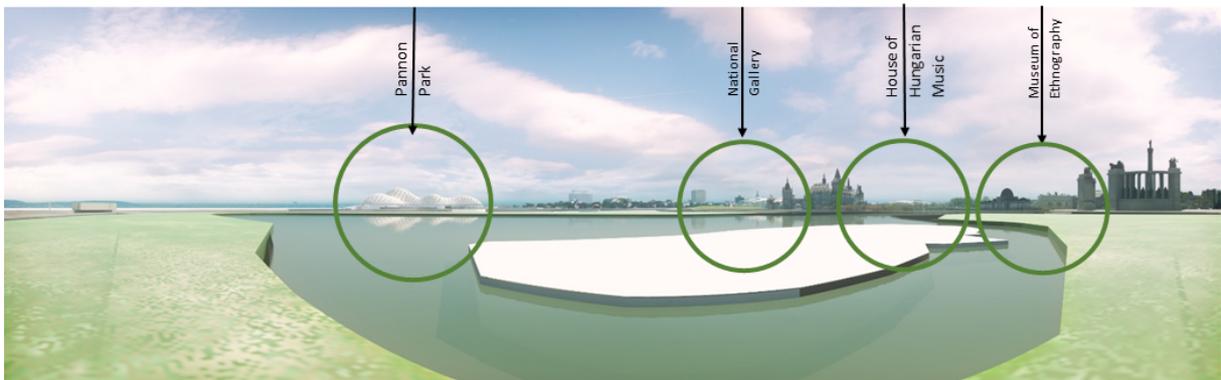
View from the lake bridge southeast without vegetation (fiction)

Figure 80 | Visibility analysis of the new buildings

(source: Városliget Zrt.)



View from the lakeside north with vegetation



View from the lakeside north without vegetation (fiction)

Figure 81 | Visibility analysis of the new buildings

(source: Városliget Zrt.)

In summary, it can be stated that

- based on the visual impact assessment, the only new building visible from the crossing of Andrásy Avenue – forming a part of the World Heritage site – and Dózsa György Road will be the Ethnographic Museum,
- from the visual centre of the core area of the World Heritage site (from the central point of Heroes' Square), the new buildings will be hidden by vegetation and by the buildings of the World Heritage site, meaning that the buildings of the World Heritage site and the planned new buildings cannot be seen together.

8.4. IMPACT ANALYSIS

TIME FRAME FOR THE IMPACT OF THE INTERVENTIONS TO ASSERT THEMSELVES

INTERVENTION	TIME FRAME FOR IMPACT	
	SHORT TERM (2022-2024)	MIDDLE TERM (2025-2031)
CHANGES TO URBAN STRUCTURE		
1. Increase in developed areas	+	+
2. Expansion of the green space of the City Park		+
3. Elimination or transformation of functions that are noisy or heavily burden the environment	+	
4. Elimination of transit traffic on Kós Károly Promenade	+	+
5. Elimination of the P+R parking lots along Dózsa György Road	+	
6. Relocation of the Dózsa György Road P+R parking lots and the restriction of parking	+	
CHANGES IN THE USE OF AREAS		
7. Consolidation of the territory of the Budapest Zoo and Botanical Gardens with the territory of the former Amusement Park	+	
8. Dissolution of the former Dózsa György Road “parade square”	+	
9. Demolition of the Petőfi Hall building and the paved surroundings of the building	+	
10. Demolition of the HUNGEXPO buildings	+	
11. Reduction of the currently paved surfaces of the City Park		+
SZABÁLYOZÁSI ELEMEEK		
12. Framing of the City Park Building Regulations and the regulatory parameters	+	+
TRANSPORTATION LINKS		
13. Radical transformation of the transportation system		+
14. Bicycle paths in the park		+
15. Public transportation in the park		+
VISITORSHIP		
16. Increased visitorship to the City Park		+
17. Spatial distribution of the visitors to the City Park		+

Table 9 | Time frame for impact assertion

8.4.1. SHORT TERM IMPACT ANALYSIS (1-3 YEARS)

The short term impact (2022-2024) of the implementation of the planned development projects are expected after the Liget Budapest Project is realized. According to the plans, the renovated City Park will be opened in 2022. In the period up until then impact related to construction can be taken into account (see: Section 8.4).

The actual impact – in the case of most of the effects – can be appraised in the long term, and so those are noted in their own section. At the same time there are naturally also short term effects.

Note: The interventions detailed below follow the numbering system of table 6 in section 8.1: “The characteristics of the interventions and their impact”.

1. Increase in developed areas

In the territory of the City Park’s 911,392 m² area (net 910,978 m²), in addition to the 22,049 m² of developed ground area to remain, approximately 37,592 m² more is expected to be built upon based on the present state of preparation of the architectural plans for the new museums. This totals 59,641 m² of built in area (remaining after demolition and new construction), representing a development ratio of 6,55%, which is less than the allowed 7.0%. The gross ground area of the new buildings will be less than the total developed ground area presumed in the working sections supporting the City Park Building Regulations.¹⁸

The total developed ground area for the Museum of Ethnography on Dózsa György Road will be approximately 11,314 m², which is less than its presumed dimensions in the working sections supporting the City Park Building Regulations.

The further changes of the park:

- on the one hand will be constructed along Dózsa György Road on areas that are currently paved,
- on the other hand, the water surfaces will be 45,260.38 instead of the current 7,328 m²

The new buildings will be placed over the former built in areas. (Building and paved surfaces.)

3. Elimination or transformation of functions that are noisy or heavily burden the environment

During the developments the institutions found in the City Park will be transformed and some will be removed. The significance of the entertainment furnishings and shows that increased the attraction and was the basis of the atmosphere of the City Park in the past has now changed

¹⁸ City Park Building Regulations / 03_1_Alatamaszto.pdf / pages 3-9

completely. The former Amusement Park – although its beautiful protected properties still stand today – is unable to compete with the fantastic technical wonders offered by 21st century theme parks. These demand far more space, are noisy and attract significant traffic, which is why they are generally located on the edge of town.¹⁹

The closing down of the Amusement Park (2013) and the joining of its territory to the Zoo represents a new phase in the life of the City Park, opening a new path for the popular institution to better operate and develop. “According to the plans two main presentation units will be created [...] the first is the Storybook Park and the second is the [...] Pannon Park”, which will present the world of the Carpathian Basin from 10-15 million years ago.

In one half of the latter nearly two hectare “biodome” there will be an ancient Pannonian wilderness and in the other half an aquarium of the Pannonian Sea.²⁰ The protected rides of the former Amusement Park – the rollercoaster, the cave railway, the storybook boat and the merry-go-round – will remain.

The demolition of the Petőfi Hall, whose events were a burden on the park, is also a favorable change.

The impact is favorable, because this strengthens the City Park’s function as a public park with the noisy and typically erratic traffic generated by the Amusement Park and the Petőfi Hall being replaced by new institutions focused on education.

4. Elimination of transit traffic on Kós Károly Promenade

The elimination of transit traffic on Kós Károly Promenade and making it into a true walking path is one of the most significant interventions in the urban structure. It will have a dual impact:

4.1. the international transit traffic passing through the World Heritage site will be discontinued, or in other words the traffic from the feeder section of the M3 expressway, the Moscow to Budapest international communication and commercial corridor, will not travel unabated through Andrassy Avenue to the downtown;

4.2. the elimination of the transit traffic could lead to the diversion of the traffic to other routes, but with proper organization – in some cases with supplemental interventions – it is possible that

4.2.1. on the one hand due to easier access to the downtown, those using the M3 expressway – Andrassy Avenue approach will not appear in the area,

19 Europe’s most popular amusement parks are visited by 1-5 million people per year. The newest, the “Adventure World Warsaw” theme park in Poland, will open in 2015 on 230 hectares with a cost of 600 million Euros, and with 50 attractions and numerous spectacles in six theme parks attracting 2.5 million visitors per year. <http://www.skyscrapercity.com/showthread.php?t=1454753>

20 <http://www.zoobudapest.com/rolunk/fejlesztések/pannon-park>

4.2.2. and on the other hand the traffic will be properly distributed and enter the urban street network through numerous routes.

The impact is favorable, because the transit traffic leading through the City Park will be discontinued.

Following the elimination of the transit traffic on Kós Károly Promenade the increased traffic on the surrounding traffic routes – even with the careful distribution of the traffic – will be unfavorable for the residents along the affected traffic routes. At the same time the loss of the traffic generated by the P+R parking lots to be terminated will at least in part compensate for this increased burden (see section 9.3.).

5. Removal of the P+R parking lots along Dózsa György Road

Dózsa György Road plays an important traffic distribution role in the section of the inner city outside the Grand Boulevard (Nagykörút). Running alongside the City Park, it connects the Danube River bank to Kerepesi Road. A P+R parking lot came into being on this “perimeter”, which increases the burden on the City Park and its surroundings (currently there are a total of 2,350 parking spaces on Dózsa György Road and bordering streets).

The impact is favorable, because the P+R parking will be eliminated on the edge of the City Park.

6. Relocation of the Dózsa György Road P+R parking lots and the restriction of parking

The relocation of the P+R parking lots and the restriction of parking will favorably affect the residents of the densely developed areas from Dózsa György Road to the city center (Districts VI, VII and XIV), because parking on the surrounding narrow streets cannot be managed, or can only be managed through further well-considered developments.

The reduction in parking opportunities is unfavorable for residents of the surrounding areas, while at the same time the traffic from the P+R parking lots will be eliminated on the affected sections of road.

7. Consolidation of the territory of the Budapest Zoo and Botanical Gardens with the territory of the former Amusement Park

The Amusement Park will no longer exist and its territory will be consolidated with that of the Budapest Zoo and Botanical Gardens, where Pannon Park will be created. The area is uniformly a special zoo and botanical gardens zone.

The consolidation and development of the Amusement Park and the Budapest Zoo and Botanical Gardens is a favorable change. The building of the Biodome will be realized in this area.

8. Dissolution of the former Dózsa György Road “parade square”

The paved surface (parking lots and other paved areas) that increases the width of Dózsa György Road by approximately 80 meters for an approximately 300 meter long stretch will no longer exist. Museums and their related structures will be placed on a portion of this, and it will be possible to develop green spaces on the rest. The total ground area of the buildings holding public collections to be constructed along Dózsa György Road will be approximately 10,895 m², which is significantly smaller than the paved portion of Dózsa György Road to be removed. The entire developed ground area of the Museum of Ethnography and Városliget Theater will be constructed on currently paved surfaces without any reduction in green spaces and it is probable that green spaces will also be created alongside the planned construction in the course of the transformation of the currently paved surfaces.

This is a favorable change that is a part of the reconstruction of the park, and the amount of green space will increase along with the construction of the museum buildings in this area.

9. Demolition of the Petőfi Hall building and the paved surroundings of the building

The construction of the planned new museum on the site of the Petőfi Hall building and its paved surroundings does not significantly alter the original conditions (the ground area of the Hall of Industry that originally stood on the site of the present-day Petőfi Hall was approximately 14,000 m², while the building complex planned here for the public collection will need a smaller developed ground area than this).²¹

The planned change is neutral or will be favorable in terms of green space; favorable in that at the same time the expected number of visitors to the new museum building will be distributed over time and will not reach the erratic burden from the previous events at the Petőfi Hall.

10. Demolition of the HUNGEXPO buildings

The demolition of the HUNGEXPO buildings will contribute to the total extent of developed areas in the park being similar to the present situation:

10.1. therefore, on the one hand the level of development within the park can be expected to at least remain the same,

21 “At the end of the 1800s the City Park became the site of large exhibitions. In 1885 it was here that the predecessor of the present-day Petőfi Hall, the Hall of Industry was erected according to the designs of János Kohn (who later designed the iron framework of the Schlick Factory) and Christian Ulrich (who was a teacher at the Technical University and the designer of the Ferencváros Grain Elevator, among other things). The ground area of the Neo-renaissance style building made of brick, stone, iron and glass was more than 14,000 square meters!” Source: <http://hg.hu/cikkek/varos/11111-meddig-mehetunk-meg-el-a-pecsaba>

10.2 but on the other hand the servicing of the building planned here can only be ensured through the park.

The change will be neutral or favorable in terms of green space, although it is unfavorable that the servicing and access to the building planned here is only possible through the park. The proper management of the burden requires special attention (the coordination, upkeep and traffic regulation of the operational and other traffic routes affecting the park).

12. Parameters of the adopted City Park Building Regulations

The planned parameters promote the expansion of green areas, the regeneration of the City Park and the preservation and improvement in the quality of the urban park and the cultural assets, encourage the removal of functions alien to the surroundings and restrict the emergence of new methods of use that are alien to the surroundings. The parameters of the adopted City Park Building Regulations correspond to the provisions of the related law and the legal regulations to be applied.

It is favorable that the parameters defining the maximum degree of development and the minimum amount of green space to be created all promote the above mentioned positive changes.

Short term impact analysis (1-3 years) can be summarized as follows:

- 1) The green and water surface increasing**
- 2) The Built in area will increase but the paved area decreasing.**
- 3) Zero Emission Zone: No traffic inside, no polluting system in the new buildings**
- 4) Removal/relocate of the P+R parking lots along Dózsa György Road**
- 5) Extend the park to the former “parade square”**
- 6) Demolition of the Petőfi Hall building and the paved surroundings of the building**
- 7) Demolition of the HUNGEXPO buildings**

8.4.2. MEDIUM TERM IMPACT ASSESSMENT (3-7 YEARS)

In the medium term (2025-2031), following the completion of the areas and buildings and their occupation, the life of the new and renovated institutions may begin to stabilize.

2. Expansion of the green space of the City Park

The comprehensive renovation of the green spaces of the City Park, which comprises an integral part of the historic city center, will also serve to reinforce the character of the city's inner core. The increase in the area of the green spaces from 60% to minimum 65%, the enrichment of their functional composition and the raising of the quality level of the area is in harmony with the excellence and value of Andrásy Avenue, which comprises a part of the World Heritage. **The impact is favorable, because the fundamentally recreational function of the City Park, as an urban public park, will be enhanced by the park's comprehensive renovation, the area of its green spaces will increase from 60% to minimum 65% and the quality of use of the park will improve based on a unified landscape architecture concept.**

11. Reduction of the currently paved surfaces of the City Park

The proportion of paved surfaces in the City Park is quite high. Of the 911,392 m² area, 43,202 m² is built upon, 546,430 m² is green space and 7,328 m² is water surface, so the total paved area is 313,275 m² (34,4%)²². The current proportion of green space in the City Park is 60%,²³ and this would increase to minimum 65% following the planned changes. The change is significant, +5% (61,536 m²), which is about as much as the portion of the World Heritage Site on the territory of the City Park (the Heroes' Square ensemble is approximately 67,000 m²).

It is favorable that the paved surfaces will be reduced and in their place green spaces will be created, as well as the fact that the proportion of green space in City Park will increase to minimum 65% due to the reduction in pavement.

13. Radical transformation of the transportation system

The transportation system of the City Park will fundamentally change when the transit traffic (Kós Károly Promenade) is terminated, the P+R parking lots are relocated and the number of parking spaces along the edge of the park is radically reduced.

It is favorable that the planned access, approaches and system of transportation links will serve

22 The 313,275 m² paved surface area is as much as if the area between the Kós Károly Promenade and Ajtósi Dürer Lane would be paved from the current street front of Dózsa György Road all the way to the Vajdahunyad Castle!

23 Source: City Park Building Regulations, Conditions Assessment and Conditions Analysis working section, March 2014, page 67. Source: www.budapest.hu

the planned green space and recreational functions, including the planned cultural functions (see: changes to urban structure).

14. Bicycle paths in the park

Bicycling paths can run on protected routes in the City Park within favorable circumstances. **The bicycling transportation routing will be more favorable.**

15. Public transportation in the park

As a result of the planned developments only the trolley number 70 will “cut across” the City Park – and this will also promote access to the public collections – all other routes will run along the perimeter of the park.

The modifications to public transportation links are favorable, which are aimed at making the approach to the area simpler.

16. Extra burden from the increase in visitorship to the City Park

On the basis of the estimated data of the Liget Budapest Project the total extra number of visitors to the museums and institutions will be +1,664,000 people/year, which broken down to 8 hours will result in an extra 355 people on an average weekday and an extra 1,422 people on a summer weekend, and of these only every third person will figure as a park user as well (555,000 people/year). It is probable that the institutions providing a significant proportion of the number of longer-term visitors (Budapest Zoo and Botanical Gardens, Széchenyi Baths, etc.) will figure to provide a lower share than average as of these as active park users.

It is favorable that despite the increase in the number of park users the burden on the park is only expected to increase to a lesser degree, because the new users appearing at the new institutions will only in part figure as park users.²⁴

17. Spatial distribution of the visitors to the City Park

The burden on the City Park is increased by the new buildings holding public collections, even though the possibility for large events causing erratic visitor traffic is reduced by the demolition of the Petőfi Hall. The estimated number of visitors to the Hungarian National Gallery and the House of Hungarian Music is approximately 750,000 people (presently: approximately 392,000 people). The estimated number of extra visitors who also use the park is approximately 250,000

²⁴ The accepted maximum for the intensity of park use, or rather its capacity is 40-50 people/hectare. <http://www.nerrs.noaa.gov/doc/siteprofile/acebasin/html/modules/landuse/lmtourism.htm>
hivatkozás: Hall, J.M. 1974. The capacity to absorb tourists. Built Environment 3:392-397.

people/year, or in other words 428 people/day on an average weekday, and 1,715 people /day on a summer weekend.

The spatial distribution of the visitors will improve with the construction of the new museums.

It is favorable that the extra number of visitors connected to the construction of the new public collections is expected to be distributed in the surroundings of the public collections. Therefore, the manner in which the new buildings are sited, characteristically located along the perimeter of the City Park, will promote the more even distribution of park users.

Medium term impact assessment (3-7 years) can be summarized as follows:

- 1) Expansion of the green space of the City Park**
- 2) Reduction of the currently paved surfaces of the City Park**
- 3) Radical transformation of the transportation system**
- 4) Bicycle paths in the park**
- 5) Public transportation in the park**
- 6) New Institutions on the plot of the formal buildings/or paved area**
- 7) Extra burden from the increase of the number of the visitors +1,664,000 people/year to the City Park**
- 8) Elimination of transit traffic on Kós Károly Promenade, stopping the M3 highway getting through the Park**

In conclusion, it can be established that no negative impact is expected to be asserted on the World Heritage site during the operation of the planned elements for the Liget Budapest Project.

If there is proper planning and organization for the movement of the visitors, differentiated functional composition and proper spatial distribution in the garden and landscape architecture designs the current disproportion in the use of areas can be significantly reduced, so the distribution of burdens can also be more balanced.

In the interest of preserving the high quality of the park and the condition of the environment, it will be practical to account for more intensive maintenance of the park in the more popular and therefore more often used areas.

The impact related to general museum operations will not endanger the World Heritage site.

8.5. THE ESTIMATED IMPACT OF THE INTERVENTIONS DURING THEIR IMPLEMENTATION

ALTERATION OF TRAFFIC

The planned interventions will fundamentally alter the transportation system of the City Park.

PUBLIC ROAD TRANSPORTATION

The most significant alteration to public road transportation is the elimination of transit traffic on Kós Károly Promenade. The requirement for prohibiting transit traffic is the implementation of several transportation development projects and the introduction of traffic regulation measures (see Section 9).

During the process of implementing the Liget Budapest Project these measures may have indirect effects while the section of Kós Károly Promenade is being transformed. This construction work can be performed according to a phased schedule.

The second significant intervention is the elimination of the P+R parking lots along Dózsa György Road, which is connected with the construction of the buildings of the Museum of Ethnography and the Városliget Theater. During construction the restriction of traffic on Dózsa György Road must be anticipated. The relocation of the P+R parking lots and their construction elsewhere does not affect the World Heritage site.

PUBLIC TRANSPORTATION

The alteration of the internal transportation system may result in a change in the City Park's public transportation, which will allow for proper links from P+R parking lots and public transportation stops to the institutions of the City Park through the development and enhancement of the present system of links.

BICYCLE TRANSPORTATION

The system of bicycle transportation may be modified during the construction phase; temporarily and in certain areas there may be restrictions within the City Park. At the same time, attention should be paid to avoiding conflicts that may possibly develop with automobiles or pedestrians.

PEDESTRIAN TRAFFIC

The competition entries for the garden and landscape architecture in 2015 had a significant role in the formation of the network of pedestrian routes within the City Park. During the implementation of the project, the proper scheduling of the construction and landscaping work and restrictions on pedestrian traffic possibilities must be taken into account on a temporary basis and in certain areas (construction zones).

TOURISM

During the implementation of the project the movement of tourists visiting the City Park may be temporarily restricted in certain construction zones, but the current tourist attractions will remain accessible in general even during the construction work.

DEMOLITION WORK

At the present level of detail of the plans, measures related to the organization of the demolition work and the mitigation of its environmental impact may be limited primarily by the usual procedures and regulations.

NOISE AND VIBRATIONS

During implementation of the project, the noise and vibrations caused by the demolition work must be accounted for, primarily within the park. Buildings that are sensitive to noise and vibrations are primarily located along the surrounding roads, while building demolition can be primarily expected within the park (the Petőfi Hall, Hungexpo area, etc.). The impact of the removal of paving will be felt throughout the entire territory of the park and even along the surrounding roads. The impact caused by noise and vibrations can be reduced to the minimum level that is absolutely necessary through proper organization.

The noise effects and vibrations from demolition will not endanger the World Heritage site.

AIR POLLUTION AND DUST

The degree of air pollution during the demolition work can be reduced to the minimum level that is absolutely necessary through the use and observance of proper technological procedures (water spray suppression, etc.)

The air pollution from the demolition will not endanger the World Heritage site.

TRANSPORTATION OF CONSTRUCTION MATERIALS AND DEMOLITION WASTE

The impact of the transportation of construction materials, earth and plants to and from the site can be reduced to the minimum level that is absolutely necessary through the proper determination and indication of construction transportation routes.

The transportation of construction materials and demolition waste will not endanger the World Heritage site.

CONSTRUCTION

At the present level of detail of the plans, the organization of construction work and the measures related to the mitigation of environmental impact may be limited primarily by the usual procedures and regulations

The construction work will not endanger the World Heritage site.

THE IMPACT AND RECIPROCAL EFFECTS OF THE IMPLEMENTATION WORK

ACTIVITIES	IMPACT DURING IMPLEMENTATION				notes
	air pollution	noise and vibration	traffic restrictions	restrictions of use	
demolition	+	+	+	+	the "construction zones" will be demarcated according to a schedule
construction	+	+	+	+	the "construction zones" will be demarcated according to a schedule
transportation (of goods, construction materials and demolition waste)	+	+	+	+	can be managed through the proper organization of transportation
traffic (public road, public transportation, bicycle and pedestrian)	+	+	+	+	in the construction zones traffic will be prohibited or restricted for safety reasons; the necessary traffic can be ensured
operation of institutions (temporary and permanent)	+	+	+	+	the operation of existing institutions and those not affected by construction can be ensured

Table 10 | Impact and reciprocal effects of the implementation work

8.6. ESTIMATED IMPACT OF OPERATIONS ON THE OUTSTANDING UNIVERSAL VALUE FOLLOWING COMPLETION

IMPACT RELATED TO GENERAL MUSEUM OPERATIONS

No negative impact is expected to be asserted on the World Heritage site during the operation of the planned elements for the Liget Budapest Project. If there is proper planning and organization for the movement of the visitors, differentiated functional composition and proper spatial distribution in the garden and landscape architecture designs the current disproportion in the use of areas can be significantly reduced, so the distribution of burdens can also be more balanced.

In the interest of preserving the high quality of the park and the condition of the environment, it will be practical to account for more intensive maintenance of the park in the more popular and therefore more often used areas.

The impact related to general museum operations will not endanger the World Heritage site.

8.7. RELATIONSHIPS BETWEEN ATTRIBUTES AND IMPACT

The relationships between the effects of the “Liget Budapest Project” and the attributes of the World Heritage site are summarized in the following table:

EVALUATION OF THE IMPACT ASSERTED ON ATTRIBUTES BY THE INTERVENTIONS														
INTERVENTIONS	ATTRIBUTES													
	Andrássy Avenue	Underground railway	Heroes Square ensemble				City Park	Vajdahunyad Castle	City Park Lake	Budapest Zoo and Botanical Gardens	street network and public spaces	system of lots	degree of development and stock of buildings	street pavement and public objects
			Museum of Fine Arts	Múcsarnok Art Gallery	Millennium Monument	Memorial Stone for Hungarian Heroes								
EXPLANATION OF THE VALUES IN THE TABLE:														
SCALE AND SEVERITY OF THE IMPACT														
1. no change														
2. negligible change														
3. minor change														
4. moderate change														
5. major change														
1. Increase in developed areas	2	2	2	2	2	2	2	2	1	1	1	1	2	1
2. Expansion of the green space of the City Park	1	1	2	2	1	1	4	1	1	1	4	1	2	1
3. Elimination of functions that are noisy or heavily burden the environment	1	1	1	1	1	1	4	2	1	1	1	1	1	1
4. Elimination of transit traffic on Kós Károly Promenade	5	2	4	4	4	4	4	4	3	3	4	1	1	1
5. Elimination of the P+R parking lots along Dózsa György Road	2	2	2	1	1	1	4	1	1	1	1	1	1	1
6. Relocation of the Dózsa György Road P+R parking lots and the restriction of parking	2	2	2	2	1	1	4	1	1	2	1	1	1	1
7. Consolidation of the Budapest Zoo and Botanical Gardens with the former Amusement Park	1	2	1	1	1	1	2	1	1	5	1	2	1	1
8. Dissolution of the former Dózsa György Road “parade square”	3	1	1	1	1	1	4	1	1	1	1	2	1	1
9. Demolition of the Petőfi Hall building and the paved surroundings of the building	1	1	1	1	1	1	3	1	1	1	1	1	2	1
10. Demolition of the HUNGEXPO buildings	1	1	1	1	1	1	3	2	1	1	1	1	2	1
11. Reduction of the currently paved surfaces of the City Park	1	1	1	1	1	1	4	2	2	2	2	1	1	1
12. City Park Building Regulations	2	2	3	3	3	3	3	2	2	2	1	1	3	2

EVALUATION OF THE IMPACT ASSERTED ON ATTRIBUTES BY THE INTERVENTIONS														
INTERVENTIONS	ATTRIBUTES													
	Andrássy Avenue	Underground railway	Heroes Square ensemble				City Park	Vajdahunyad Castle	City Park Lake	Budapest Zoo and Botanical Gardens	street network and public spaces	system of lots	degree of development and stock of buildings	street pavement and public objects
			Museum of Fine Arts	Múcsarnok Art Gallery	Millennium Monument	Memorial Stone for Hungarian Heroes								
EXPLANATION OF THE VALUES IN THE TABLE: SCALE AND SEVERITY OF THE IMPACT 1. no change 2. negligible change 3. minor change 4. moderate change 5. major change														
13. Radical transformation of the transportation system	3	2	2	2	2	2	2	2	1	2	4	1	1	3
14. Bicycle paths in the park	1	1	1	1	1	1	3	2	1	2	3	1	1	2
15. Public transportation in the park	2	2	2	2	2	2	2	2	1	2	3	1	1	2
16. Increased visitorship to the City Park	2	2	2	2	2	2	2	2	1	2	2	1	1	3
17. Spatial distribution of the visitors to the City Park	2	2	2	2	2	2	2	2	1	2	2	1	1	3
18. <i>Planned guest services *</i>	1	1	1	1	1	1	1	1	1	1	1	1	2	2
19. <i>Other services* (security watch, restrooms, etc.)</i>	1	1	1	1	1	1	1	1	1	1	1	1	2	2
20. <i>Reconstruction of City Park Lake*</i>	1	1	1	1	1	1	3	4	4	1	1	1	1	2

* Further elements defined in the City Park Building Regulations

Table 11 | Evaluation of the impact asserted on attributes by the interventions

CLASSIFICATION OF THE IMPACT ON THE WORLD HERITAGE SITE (HEROES' SQUARE ENSEMBLE)

CLASSIFICATION OF THE INTERVENTIONS AND THEIR IMPACT ON THE WORLD HERITAGE SITE				
INTERVENTION	characteristically favorable	neutral	characteristically unfavorable	Recommendations related to counterbalancing the impact
	1. Increase in developed areas		∅	
2. Expansion of the green space of the City Park	+			-
3. Elimination of functions that are noisy or heavily burden the environment	+			-
4. Elimination of transit traffic on Kós Károly Promenade	+			implementation of necessary transportation improvements outside the area
5. Elimination of the P+R parking lots along Dózsa György Road	+			implementation of necessary transportation improvements outside the area
6. Relocation of the Dózsa György Road P+R parking lots and the restriction of parking	+			implementation of necessary transportation improvements outside the area
7. Consolidation of the Budapest Zoo and Botanical Gardens with the former Amusement Park		∅		-
8. Dissolution of the former Dózsa György Road "parade square"	+			-
9. Demolition of the Petőfi Hall building and the paved surroundings of the building	+			-
10. Demolition of the HUNGEXPO buildings	+			-
11. Reduction of the currently paved surfaces of the City Park	+			-
12. City Park Building Regulations	+			-
13. Radical transformation of the transportation system	+			implementation of necessary transportation improvements outside the area
14. Bicycle paths in the park	+			-
15. Public transportation in the park	+			-
16. Increased visitorship to the City Park			-	can be counterbalanced by the appropriate spatial distribution of the functions and proper maintenance
17. Spatial distribution of the visitors to the City Park	+			the increase can be counterbalanced by the more favorable spatial distribution

Table 12 | The assessment of the impact of the interventions

8.8. ASSESSMENT OF IMPACT

SUMMARY ASSESSMENT OF THE IMPACT (ON THE WORLD HERITAGE SITE AND THE BUFFER ZONE)

In the following assessment the attributes are understood as the entirety of every attribute (the entire architectural ensemble of Heroes' Square) that is located in the World Heritage site.

Where the impact only affects a particular attribute this is noted.

The assessment of the effects includes the following categories:

no change	negligible change	minor change	moderate change	major change
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CLASSIFICATION OF IMPACT ON THE WORLD HERITAGE AREA		
INTERVENTION	IMPACT AND CHARACTER	IMPACT ASSERTED ON THE ATTRIBUTES
1. Increase in developed areas	<ul style="list-style-type: none"> typically created by construction upon presently developed and paved areas (-) increase in development will be created on paved areas and Dózsa György Road (+) 	IMPACT ON THE WORLD HERITAGE SITE: <ul style="list-style-type: none"> no change
		IMPACT ON THE BUFFER ZONE: <ul style="list-style-type: none"> moderate change typically unfavorable impact the extra development typically will be constructed using the paved areas on Dózsa György Road, while in the park the appropriation of green space can be reduced through the utilization of areas gained by demolishing existing buildings and paved areas in the park
2. Expansion of the green space of the City Park	<ul style="list-style-type: none"> condition of the surroundings of the museums will become more favorable attraction of the park will increase (-) spatial distribution of the visitors over a larger area improves (+) microclimate will improve with the reduction in pavement (+) 	IMPACT ON THE MŰCSARNOK ART GALLERY AND THE MUSEUM OF FINE ARTS: <ul style="list-style-type: none"> negligible change typically positive impact the quality of the environment improves
		IMPACT ON THE MILLENNIUM MONUMENT AND THE MEMORIAL STONE FOR HUNGARIAN HEROES: <ul style="list-style-type: none"> no change
		IMPACT ON THE BUFFER ZONE: <ul style="list-style-type: none"> moderate change typically positive impact quality of the environment will improve, so an increase in the value of the surrounding areas is expected
3. Elimination of functions that are noisy or heavily burden the environment	functions found in the broader surroundings of the World Heritage area: <ul style="list-style-type: none"> peacefulness of the park will improve burden on the environment will be reduced 	IMPACT ON THE WORLD HERITAGE SITE: <ul style="list-style-type: none"> no change
		IMPACT ON THE BUFFER ZONE: <ul style="list-style-type: none"> moderate change typically positive impact an increase in the value of the surrounding areas is expected

INTERVENTION	IMPACT AND CHARACTER	IMPACT ASSERTED ON THE ATTRIBUTES
4. Elimination of transit traffic on Kós Károly Promenade	<ul style="list-style-type: none"> • automobile traffic will decrease (+) • burden on the environment will be reduced: air pollution, noise, etc. (+) • peacefulness of the park will improve • microclimate will improve with the reduction in pavement (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> • moderate change • typically positive impact • integrity of the ensemble will improve (requirement: implementation of necessary development outside the area) <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> • moderate change • typically positive impact • condition of the environment will improve • quality of the environment will improve • burden on the environment will be reduced
5. Elimination of the P+R parking lots along Dózsa György Road	<ul style="list-style-type: none"> • automobile traffic will decrease (+) • microclimate will improve with the reduction in pavement (+) • burden on the environment will be reduced: air pollution, noise, etc. (+) • peacefulness of the park will improve (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> • minor impact • typically positive impact • reduction in traffic, or due to reorganization the burden on the environment will be reduced (requirement: implementation of necessary development outside the area) <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> • moderate change • typically positive impact • burden on the environment will be reduced: air pollution, noise, etc.
6. Relocation of the Dózsa György Road P+R parking lots and the restriction of parking	<ul style="list-style-type: none"> • automobile traffic will decrease (+) • microclimate will improve with the reduction in pavement (+) • burden on the environment will be reduced: air pollution, noise, etc. (+) • peacefulness of the park will improve (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> • minor impact • typically positive impact • quality of the environment will improve (requirement: implementation of necessary development outside the area) <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> • moderate change • typically positive impact • condition of the environment will improve • burden on the environment will be reduced
7. Consolidation of the Budapest Zoo and Botanical Gardens with the former Amusement Park	<ul style="list-style-type: none"> • attraction of the Budapest Zoo and Botanical Gardens will increase (-) • burden will be distributed over a larger area (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> • no change <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> • minor change • typically positive impact • spatial distribution of the visitors will improve
8. Dissolution of the former Dózsa György Road "parade square"	<ul style="list-style-type: none"> • automobile traffic will decrease (+) • microclimate will improve with the reduction in pavement (+) • burden on the environment will be reduced: air pollution, noise, etc. (+) • peacefulness of the park will improve (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> • minor impact • typically positive impact • quality of the environment will improve <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> • moderate change • typically positive impact • quality of the environment will improve (requirement: implementation of necessary development outside the area)

INTERVENTION	IMPACT AND CHARACTER	IMPACT ASSERTED ON THE ATTRIBUTES
9. Demolition of the Petöfi Hall building and the paved surroundings of the building	<ul style="list-style-type: none"> creation of the new National Gallery building complex will in general occur on currently developed and paved areas (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> no change <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> negligible change new building will be constructed on the site of a previous building and its paved area
10. Demolition of the HUNGEXPO buildings	<ul style="list-style-type: none"> creation of the new National Gallery building complex will in general occur on currently developed and paved areas (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> no change <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> negligible change typically positive impact new building will be constructed on the site of a previous building and its paved area
11. Reduction of the currently paved surfaces of the City Park	<ul style="list-style-type: none"> green space will increase (+) microclimate will improve (+) burden on the environment will be reduced peacefulness of the park will improve (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> no change <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> moderate change typically positive impact condition of the environment will improve burden on the environment will be reduced
12. City Park Building Regulations	<ul style="list-style-type: none"> defines the functions that can be placed in the park (+) defines the maximum amount of development (+) defines the minimum amount of green space (+) defines the height of the buildings (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> minor change typically positive impact legal regulations guarantee the level of environmental burden in the surroundings of the World Heritage site (requirement: implementation of the necessary transportation improvements outside the area) integrity of the ensemble will improve (requirement: implementation of necessary development outside the area) <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> minor change typically positive impact legal regulations guarantee the level of environmental burden in the surroundings of the World Heritage site (requirement: implementation of the necessary transportation improvements outside the area)
13. Radical transformation of the transportation system	<ul style="list-style-type: none"> public road transit traffic and its effects will cease (+) traffic on the park's internal roads will significantly decrease, parking will be limited to the institutions or be removed (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> moderate change typically positive impact integrity of the ensemble will improve (requirement: implementation of necessary development outside the area) <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> moderate change typically positive impact integrity will improve (requirement: implementation of necessary development outside the area)

INTERVENTION	IMPACT AND CHARACTER	IMPACT ASSERTED ON THE ATTRIBUTES
14. Bicycle paths in the park	<ul style="list-style-type: none"> network of bicycle paths will be created in the park (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> no change <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> minor change network of bicycle paths will be created in the park
15. Public transportation in the park	<ul style="list-style-type: none"> internal public transportation with electrical vehicles is planned (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> no change <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> minor change typically positive impact modern public transportation will be created in the park
16. Increased visitorship to the City Park	<ul style="list-style-type: none"> number of visitors will increase (-) proportion of usable green space will increase to 65% (+) spatial distribution of the visitors will improve favorably, decreasing in overburdened areas and increasing in less used areas (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> negligible change typically unfavorable impact can be counterbalanced through the proper spatial distribution of the functions and proper maintenance <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> minor change typically unfavorable impact differentiated functional development can make it possible to balance the disparity of use in different areas (park reconstruction)
17. Spatial distribution of the visitors to the City Park	<ul style="list-style-type: none"> spatial distribution of the visitors will improve favorably, decreasing in overburdened areas and increasing in less used areas (+) 	<p>IMPACT ON THE WORLD HERITAGE SITE:</p> <ul style="list-style-type: none"> negligible change typically positive impact the increase can be balanced by more favorable spatial distribution <p>IMPACT ON THE BUFFER ZONE:</p> <ul style="list-style-type: none"> minor change typically positive impact differentiated functional development can make it possible to balance the disparity of use in different areas

Table 13 | Classification of impact

During the assessment it is practical to separate the evaluation for the Heroes' Square ensemble that is part of the World Heritage site and the City Park that is in the buffer zone. Due to this a dual assessment is possible, which provides a more precise description of the impact.

ASSESSMENT OF THE IMPACT ON THE AFFECTED WORLD HERITAGE AREA

CLASSIFICATION OF THE AFFECTED VALUE		ASSESSMENT OF THE IMPACT		NOTES
		NEGLIGIBLE	MODERATE	
Heroes' Square	VERY HIGH	+		<i>built heritage</i>
City Park	HIGH		+	<i>historic park</i>

Table 14 | Assessment of the impact on the affected World Heritage area

It can be established that from the aspect of the elements of the Heroes' Square ensemble and its entirety, which can be classified as having "very high" value, the planned interventions are "negligible", while in the case of the City Park, which is part of the buffer zone and has a "high" value, the total impact is "moderate".

On the basis of the ICOMOS Guidelines²⁵ the assessment of the areas and the impact asserted on them can be represented in the following manner; the color code employed also follows the Guidelines, see above on page 130:

ASSESSMENT OF THE IMPACT ASSERTED ON THE CITY PARK PORTION OF THE WORLD HERITAGE BUFFER ZONE

WORLD HERITAGE VALUE	SCALE AND SEVERITY OF THE IMPACT				
	no change	negligible change	minor change	MODERATE CHANGE	major change
	The significance of the intervention or general impact (both favorable and unfavorable)				
	neutral	slight	moderate/ large	large/ very large	very large
very high	neutral	slight	moderate/ large	large/ very large	very large
HIGH	neutral	slight	moderate/ large	MODERATE/ LARGE	large/ very large
medium	neutral	neutral/ slight	slight	moderate	moderate/ large
low	neutral	neutral/ slight	neutral/ slight	slight	slight/ moderate
negligible	neutral	neutral	neutral/ slight	neutral/ slight	slight

25 Guidance on Heritage Impact Assessments for Cultural World Heritage Properties
A publication of the International Council on Monuments and Sites January 2011

Table 15 | Assessment of the impact asserted on the City Park portion of the World Heritage buffer zone

ASSESSMENT OF THE WORLD HERITAGE SITE (HEROES' SQUARE ENSEMBLE)

WORLD HERITAGE VALUE	SCALE AND SEVERITY OF THE IMPACT				
	no change	NEGLIGIBLE CHANGE	minor change	moderate change	major change
	The significance of the intervention or general impact (both favorable and unfavorable)				
	neutral	slight	moderate/ large	large/ very large	very large
VERY HIGH	neutral	SLIGHT	moderate/ large	large/ very large	very large
high	neutral	slight	moderate/ slight	moderate/ large	large/ very large
medium	neutral	neutral/ slight	slight	moderate	moderate/ large
low	neutral	neutral/ slight	neutral/ slight	slight	slight/ moderate
negligible	neutral	neutral	neutral/ slight	neutral/ slight	slight

Table 16 | Assessment of the World Heritage site (Heroes' Square ensemble)

The necessary recommendations for the assertion of the impact characterized as positive are summarized in the section entitled “9. Recommended Measures for the Optimization of the Impact of the Planned Interventions”.

The implementation of the tasks and investments detailed there are a condition for the assertion of the positive impact.

9. RECOMMENDED MEASURES FOR THE OPTIMIZATION OF THE IMPACT OF THE PLANNED INTERVENTIONS

9.1. TRAFFIC MODELING OF LIGET BUDAPEST PROGRAM (FŐMTERV | 2016)

9.1.1. THE PERFORMED SCREENING FOR TRAFFIC TAKES INTO CONSIDERATION THE ENTIRE PROGRAM INSIDE THE PARK:

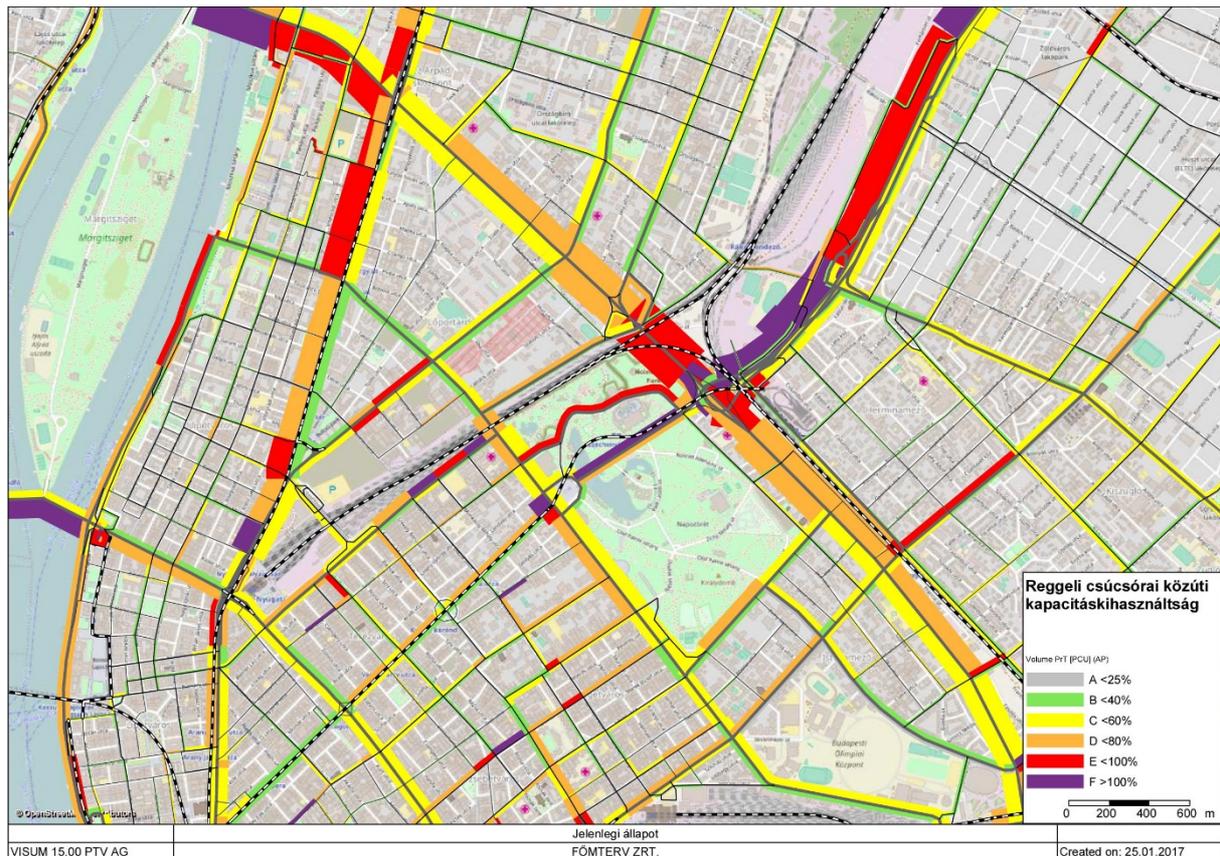


Figure 82 | Capacity utilization

- Museum of Transportation (reconstruction),
- New National Gallery,
- Museum of Ethnography,
- Hungarian House of Music,
- Underground and surface (P+R) parking lots,
- Children's Városliget Theatre (reconstruction),
- Millennium House (restoration) and
- Traffic changes (including the blocking of the main crossing road and the new bypass road beside the railway).

9.1.2. CURRENT TRAFFIC

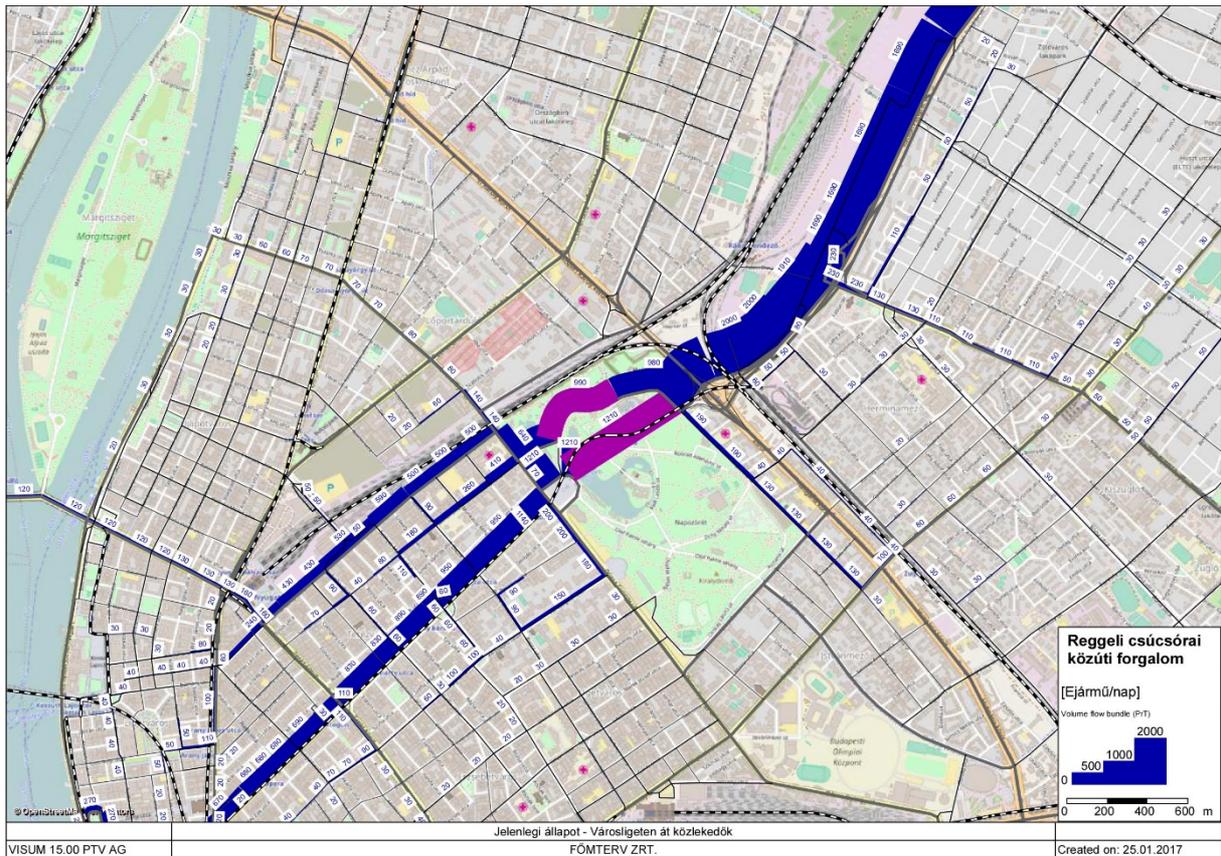


Figure 83

- In the morning rush hour Kós Károly Promenade is overcrowded with cars along its entire length, Dózsa György Street between Andrásy Avenue – Vágány Street is overcrowded with traffic both in the morning and the afternoon rush hour,
- The right lane on Hungária Avenue is overcrowded with traffic from Vágány Street to the beginning of the M3 expressway,
- In the morning rush hour the majority (73%) of traffic arriving from the city suburbs is heading towards 6-13th districts, while the minority (27%) towards 7-8th districts.

9.1.3. TRAFFIC IMPACT ASSESSMENT CONCLUSIONS:

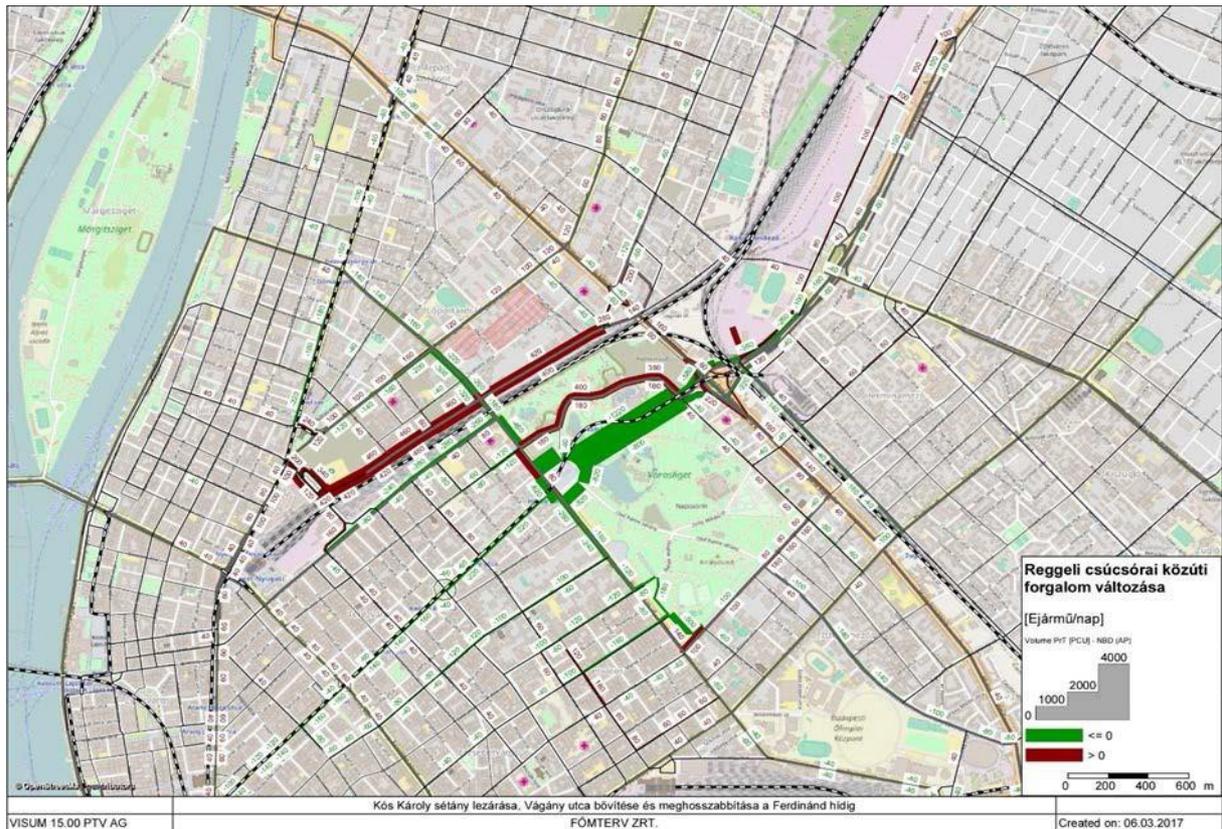


Figure 84

Traffic development elements necessary for releasing the City Park from the road traffic burden and achieving zero emissions:

- Closure of Kós Károly Promenade,
- Closure of Állatkerti Avenue for the duration of zoo opening hours,
- Expansion and extension of Vágány Street until Ferdinánd Bridge,
- Making Bulcsú Street and Lóportár Street one-way streets in the direction of the new Vágány Street,
- Enabling traffic onto Ferdinánd Bridge from the new Vágány Street in the direction of the 7th district.

9.1.4. ROAD CONSTRUCTION TRAFFIC SYSTEM RELATED TASKS:

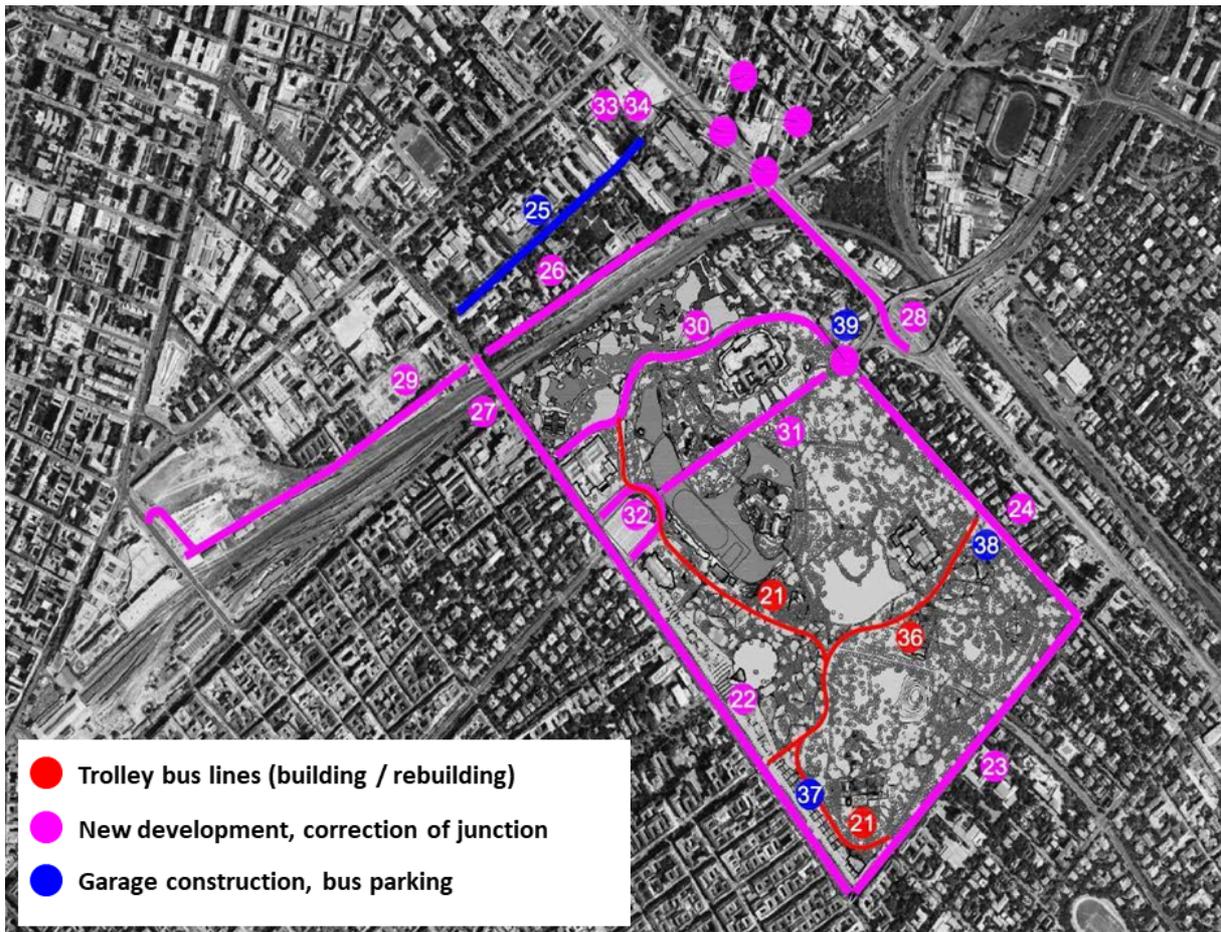


Figure 85 | Planned traffic changes

- 26: Reconstruction of Vágány Street
- 33,34: Restructuring junctions related to the closure of Kós Károly Promenade
- 30: Restructuring Állatkerti Avenue
- 31: Reconstruction of Kós Károly Promenade
- 22,27: Restructuring Dózsa György Road
- 23: Restructuring Ajtósi Dürer Lane
- 24: Restructuring Hermina Road

Relocation of the public transport lines:

- 21: Relocating the routes of BKV trolley bus lines 74/75/79
- 36: Reconstructing the route of BKV trolley bus line 70

9.1.5. UNDERGROUND GARAGES (CAPACITY FOR 1851 VEHICLES):

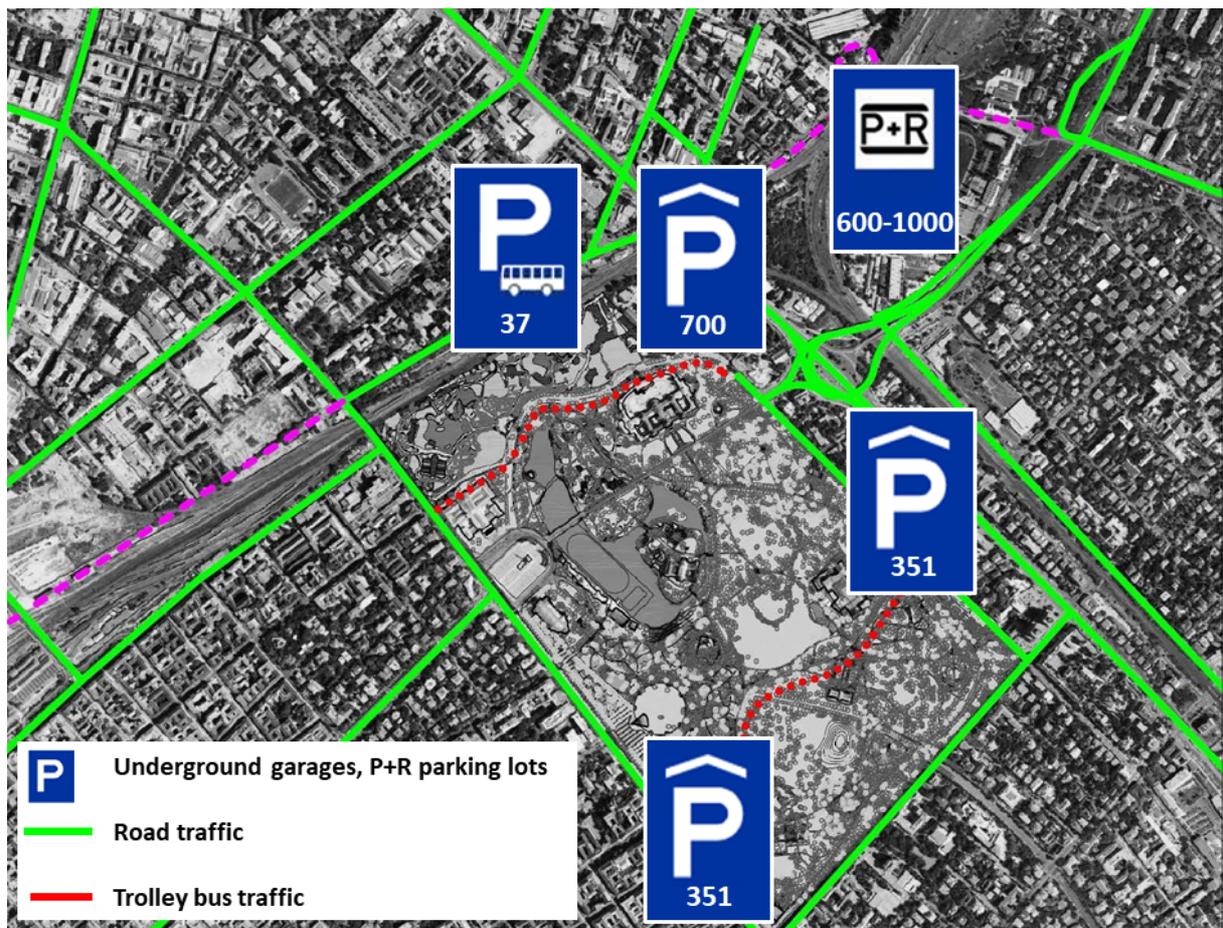


Figure 86 | Traffic flow and parking

Underground garage

- in Dózsa György Road
- Underground garage for the Transportation Museum
- Underground garage for the Zoo

9.2. NOISE PROTECTION DECISION (VIBROCOMP KFT. | 2016.)

9.2.1. CURRENT STATUS:

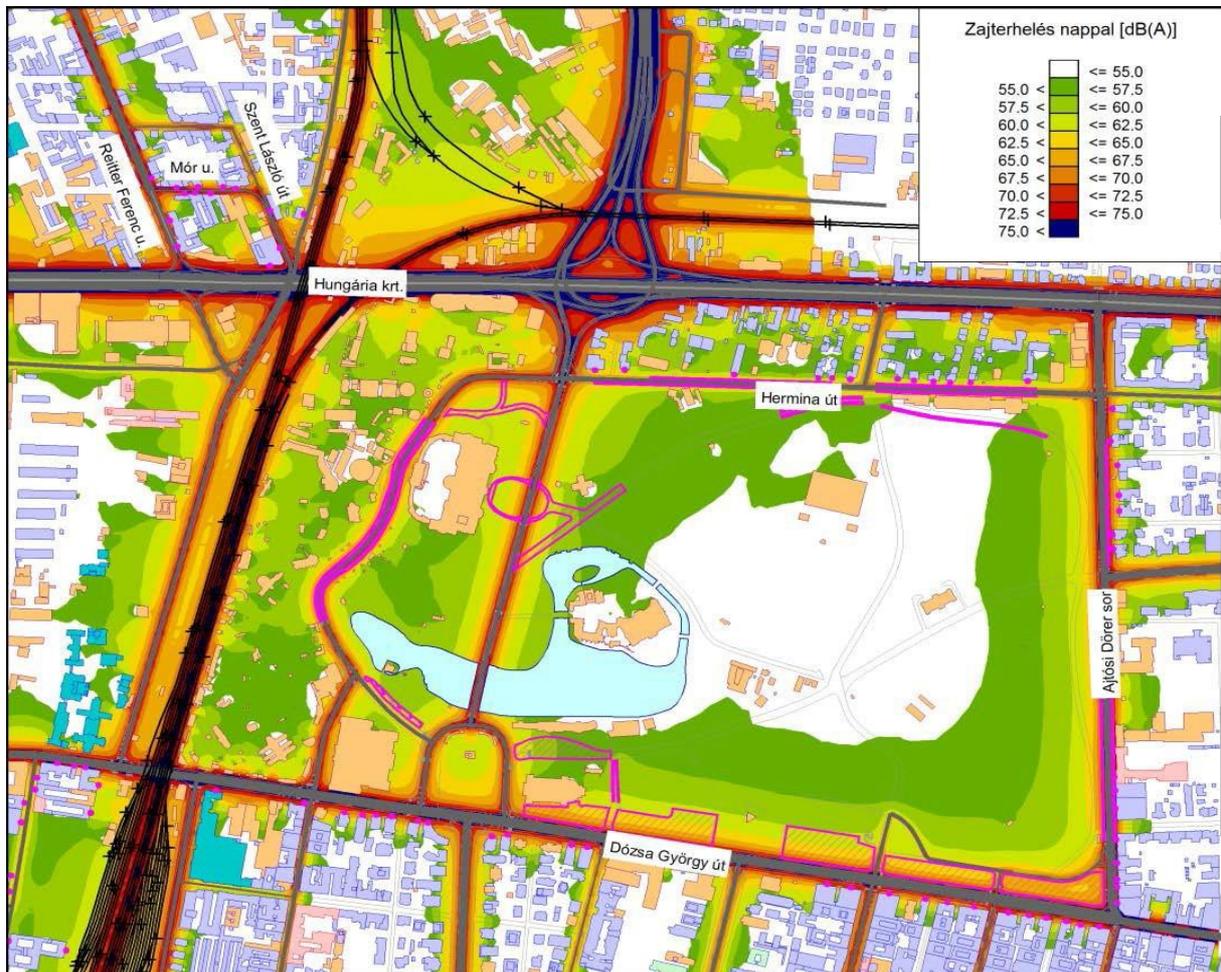


Figure 87 | Current status (2016)

In comparison to the threshold values in Appendix 3 of the Ministry of Environment and Water – Ministry of Health Care Common Decree 27/2008. (XII. 3.) the following can be established:

- Current noise pollution originating from the road exceeds the threshold limit along nearly all roads both at night and day,
- Exceeding the threshold by a significant level is typical in more sensitive utilization areas,
- Currently there is no exceeding of the threshold originating from the railroad along Vágány Street.

9.2.2. PERSPECTIVE STATUS

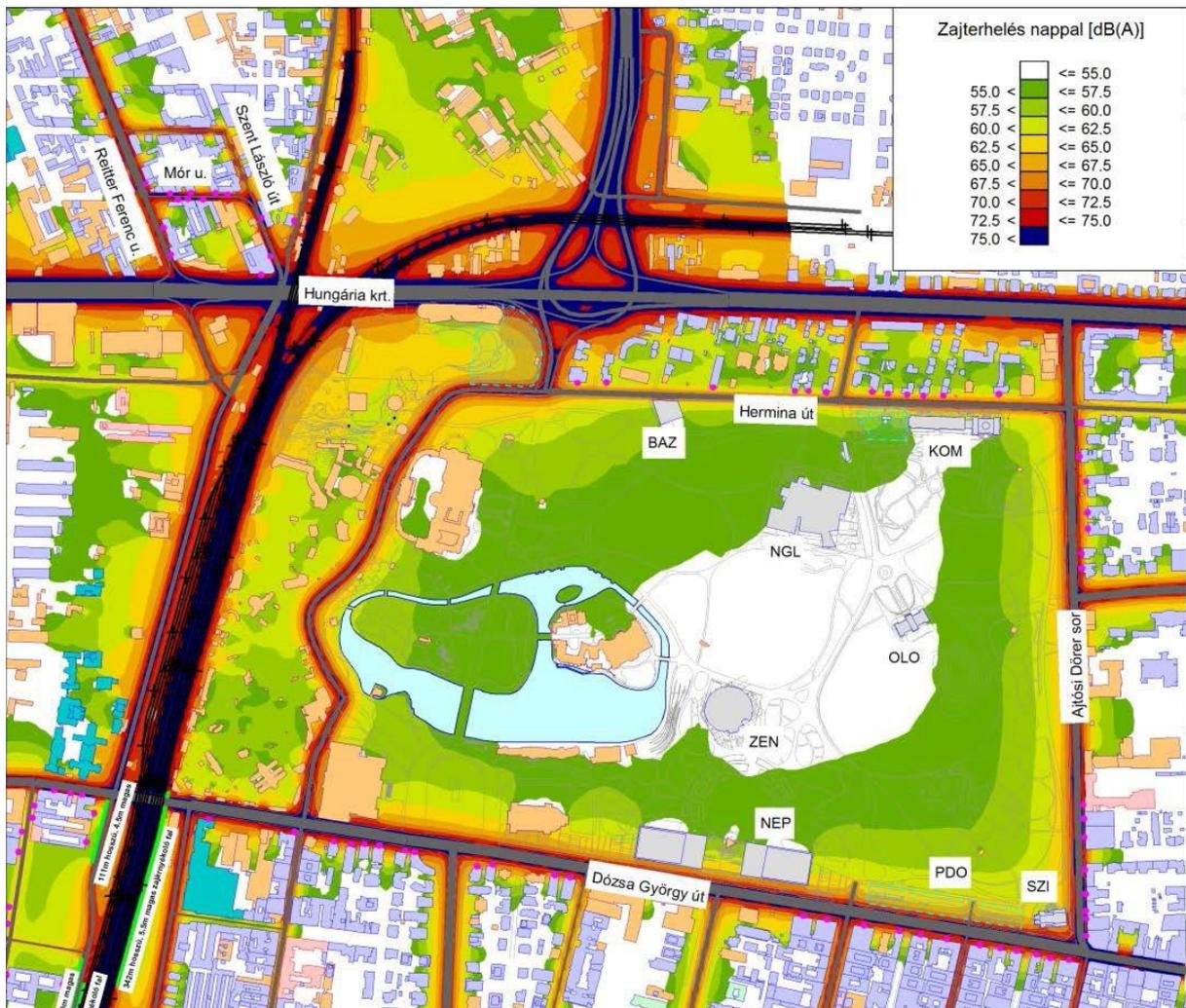


Figure 88 | Planned status (2031) with development

2031 Perspective noise protection compliance assessment, in comparison with the condition prior to the change in 2021:

- Noise pollution threshold limit – based on 4.§ (5) of the Ministry of Environment and Water – Ministry of Health Care Common Decree 27/2008. (XII. 3 – condition prior to the change (2021 without),
- In case of the one prior to the change, noise pollution increases by an insignificant amount compared to the current condition (0.1-0.8 dB).

Assessment result:

There is no significant effect on the residential area, there is a significant positive effect on the park area.

RESULTS OF TRAFFIC MODELING

From the aspect of the entirety of the World Heritage area (the World Heritage site and the buffer zone), one of the most favorable interventions is the closure of Kós Károly Promenade to traffic.

Using the Budapest Unified Traffic Model (EFM), two principal model versions were prepared taking into consideration traffic network developments, underground garages and surface and P+R lots, institutions. The Kós Károly Promenade will be closed, the Állatkerti Boulevard will be accessible in rush hour, the expansion and extension of Vágány Street towards Ferdinánd Bridge will be implemented, and one version assumes no Szegedi Road overpass, while the other version assumes construction of the Szegedi Road overpass.

Traffic modeling without the Szegedi Road overpass:

Transport development elements necessary in order to reduce the traffic burden on the City Park and to achieve zero emissions:

- closure of Kós Károly Promenade,
- closure of Állatkerti Boulevard to public traffic during periods that the Zoo is open,
- expansion and extension of Vágány Street to Ferdinánd Bridge,
- making Bulcsú Street and Lőportár Street one-way towards the new Vágány Street,
- provision of access from the new Vágány Street towards Ferdinánd Bridge in the direction of the 7th district.

Traffic modeling with the Szegedi Road overpass:

Transport development elements necessary in order to **reduce the traffic burden** on the City Park and to achieve **zero emissions**:

- closure of Kós Károly Promenade,
- closure of Állatkerti Boulevard,
- expansion and extension of Vágány Street to Ferdinánd Bridge,
- provision of access from the new Vágány Street towards Ferdinánd Bridge in the direction of the 7th district,
- realization of the Szegedi Road overpass.

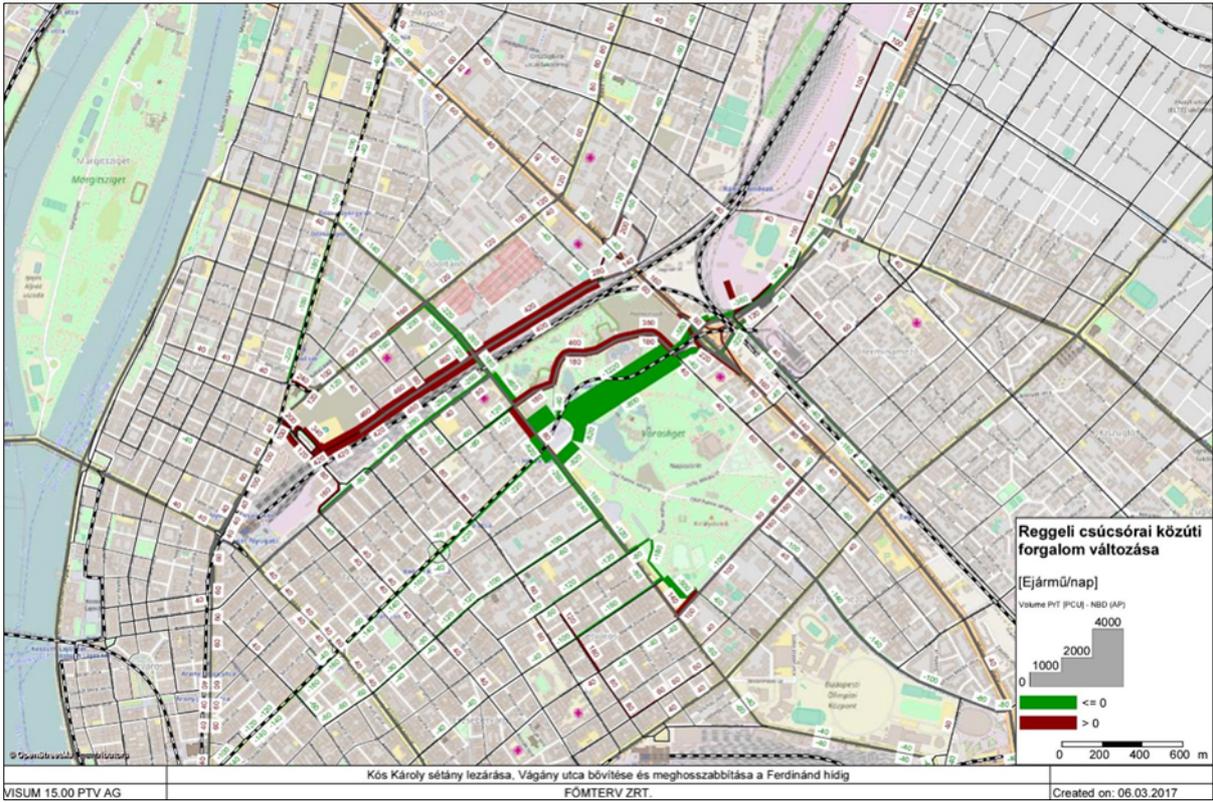


Figure 89 | Result of the traffic model without Szegedi Road overpass

(source: Városliget Zrt.)

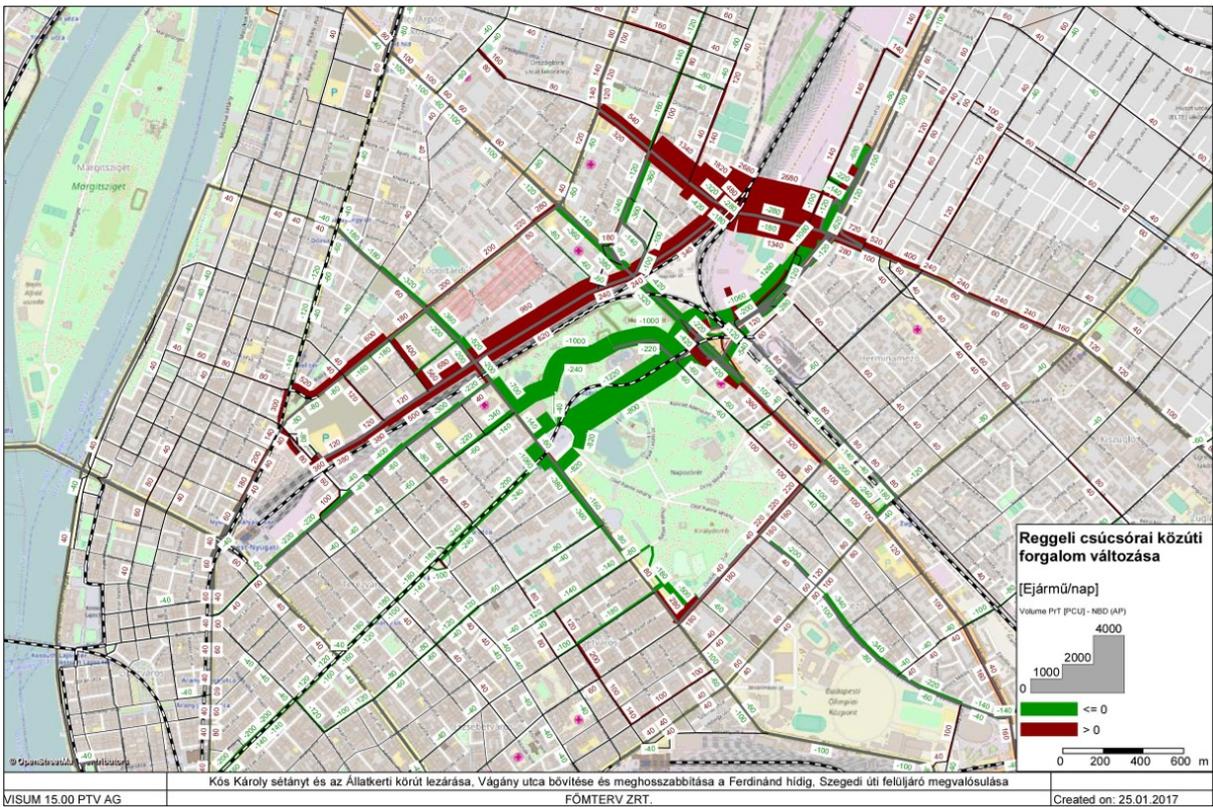


Figure 90 | Result of the traffic model implementing the Szegedi Road overpass

(source: Városliget Zrt.)

Comparison of the examined traffic model versions and summary of the principal conclusions

In both versions

- In both cases, traffic on Kós Károly Promenade is terminated,
- In both cases, traffic on Andrásy Avenue around Oktogon, on Podmaniczky Road and on certain sections of Dózsa György Road is reduced,
- No difference in the level of traffic burden on Vágány Street in the 13th district can be expected.

Without the Szegedi Road overpass

- Traffic arriving from the M3 feeder section reaches Vágány Street with block detour of Reitter Ferenc Mór Street,
- There is an increase in traffic at the M3 expressway Hungária Boulevard intersection,
- There is unlikely to be significant traffic restructuring in the area outside the 13th district on Hungária Boulevard, and we reckon on a slight increase in traffic on the main backbone network elements,
- There is an increase in traffic on Állatkerti Boulevard at rush hour in the direction of the center of town, it can be closed outside rush hour.

With the Szegedi Road overpass

- With the realization of the Szegedi Road overpass between the 13th and 14th districts, the burdens on the feeder section for the M3 expressway and Hungária Boulevard intersection are eased and movement between districts improves,
- There is likely to be significant traffic restructuring in the area outside the 13th and 14th districts on Hungária Boulevard, additional vehicle traffic appears on this part of the network since the new overpass attracts approximately 4000 vehicles in the rush hour,
- The Állatkerti Boulevard can be closed.

Based on the above, it can be established that in both versions the traffic burden on the examined part of the World Heritage area as well as the section extending to Oktogon on Andrásy Avenue and forming a part of the Budapest World Heritage site is reduced.

9.3. CONCLUSIONS AND RECOMMENDATIONS FOR THE REDUCTION OF UNFAVORABLE IMPACT

The weighing of the favorable and unfavorable impact assumes that during the interventions the changes appearing in the plans (supplemental improvements, investments, measures, etc.) will take place – in some cases, to occur outside the examined area.

- 1. The construction of new buildings and growth in developed areas permitted in the City Park Building Regulations typically will be created through the use of areas that are currently built upon and paved, contributing to the increase of green space.** The permitted increase in developed areas can be considered neutral from the standpoint of the World Heritage site, because even the closest new building will be approximately 320 meters from the center of the Heroes' Square ensemble, the center of the World Heritage site core.

The planned new buildings on the current territory of the City Park – not including the pavement on Dózsa György Road – will increase the developed area by approximately 1.32%. On the one hand this is unfavorable, because the level of development will increase, but at the same time it is favorable that the increased development will typically take place on areas freed up by the demolition of existing buildings and pavement. Therefore, in total the planned development level is lower than the value estimated in the working sections supporting the City Park Building Regulations. The planned interventions comply with the stipulations of the City Park Building Regulations.

The building of the **Museum of Ethnography** (design: Napur Architect Kft.) will be located the closest to the World Heritage site. The award-winning competition entry made a favorable impression because it recommends constructing the freestanding museum buildings nestled in the vegetation, utilizing presently paved areas and on a relatively small ground area.

The winning competition entry for the **House of Hungarian Music** (design: Sou Fujimoto Architects) is a transparent building whose height is 13.46 meters, or in other words it will remain below the height of the canopy of the existing trees. The building will be approximately 440 meters from the center of the Heroes' Square ensemble.

The building of the **New National Gallery** (design: Sejima and Nishizawa and Associates (SANAA)) will be built 700 meters from the World Heritage site. The building is located on the site of the HUNGEXPO buildings, surrounded by greenery, and as a freestanding building.

The building of the **Városliget Theater** (design: Narmer Bt.) would be built on the corner of Dózsa György Road and Ajtósi Dürer Lane, mostly on the currently paved area. Fitting into the surrounding built environment, the building would be located approximately 1000 meters from the center of the Millennium Monument.

The building of the **Biodome** (design: Mérték Építészeti Stúdió Kft.) would be built on the corner of Dózsa György Road and Ajtósi Dürer Lane, mostly on the currently paved area. Fitting into the surrounding built environment, the building would be located approximately 1000 meters from the center of the Millennium Monument.

- 4.²⁶ The elimination of transit traffic on Kós Károly Promenade will significantly transform the mode of environmental utilization.** The elimination of transit traffic on Kós Károly Promenade and the restriction of traffic heading towards the inner sections of the city on the feeder section of the M3 expressway are recommended. The placement of P+R parking lots within the line of Hungária Boulevard is also unjustified, so they will be eliminated and this role will be taken over by parking lots designated in other areas, thereby eliminating the traffic generated by P+R parking lots. So that the development project will function in the most effective manner possible, appropriate transportation improvements must be implemented outside the area (defined in the City Park Building Regulations). (see: section 9.2 and appendix)
- 5. P+R parking lots along Dózsa György Road will be eliminated.** (see: previous point 4).
- 6. P+R parking lots will be relocated and parking restricted.** (see: point 4 above)
- 13. The transportation system will be radically transformed.** Transit traffic on Kós Károly Promenade will be eliminated, the P+R parking lots will be relocated and the system for service traffic, public transportation and pedestrian traffic will be altered. (see: point 4 above)
- 16. Increased visitorship to the City Park may lead to an increase in the burden on it.** This impact affects, but does not endanger the World Heritage site and its buffer zone. On the basis of the examination of the manner of park use it can be established that the burden on the City Park is not homogenous, the number of visitors to certain areas is much higher than to other parts of the City Park. In accordance with this, one of the most important tasks of the garden and landscape architecture designs for the City Park is the proper spatial distribution of the functions. The maintenance of the park at an appropriate level requires further measures. Through these measures the burden can be arranged differentially in space, counterbalancing the unfavorable impact.

²⁶ The numbering follows the numbering of the planned interventions (see: table 11, The assessment of the impact of the interventions)

17. The current spatial distribution of the visitors to the City Park will improve with the developments. (see: point 16)

SCHEDULE FOR THE TIMING OF THE PLANNED RELATED DEVELOPMENTS

The developments listed in the previous sections are determined by the urban planning means of the capital or supplement these, and improve the functioning of the entire city as well as the City Park within it. These recommendations cannot yet be scheduled or can only be scheduled with uncertainty, because despite the fact that they are part of the urban development plan actual plans have not been prepared for any of them and the means for their implementation have not been determined. Therefore, in accordance with this the dates for their completion cannot presently be determined due to the lack of resources being assigned to them.

At the same time, section 19 of ordinance 32/2014.(VII.15.) Főv. Kgy. on the City Park Building Regulations, *“Stipulations for provisions concerning transportation infrastructure”*, establishes the actual building code requirements that are the actual and obligatory technical conditions for the planned development.

They are the following:

- The projects necessary for the elimination of traffic on Kós Károly Promenade are set down in the provisions of Section 23. The provisions stipulate the performance of four conditions that must be met for the termination of transit traffic on Kós Károly Promenade. They are as follows:

CITY PARK BUILDING REGULATIONS

“Section 23. The conditions for transportation necessary for the termination of Kós Károly Promenade’s role in the network of main roads are

- a) the designation and operation of the areas within Hungária Boulevard as a zone of restricted entry protected against transit traffic;*
- b) the creation of at least 600 P + R parking spaces for traffic on the feeder section of the M3 expressway into the interior sections of Pest;*
- c) the provision of a direct public road connection between Nagy Lajos király Road and Szegedi Road through an interchange separated from the level of the railway lines;*
- d) the remodeling of the intersections of Hungária Boulevard/Róbert Károly Boulevard with Ajtósi Dürer Lane, Dózsa György Road and Vágány Street according to the results of an independent transportation development feasibility study.”*

- In the case of the development of the building sites along Dózsa György Road (Museum of Ethnography, Városliget Theater) the performance of the following comprises the duty of the Liget Budapest Project:

CITY PARK BUILDING REGULATIONS

“Section 24 (1) The conditions for transportation necessary for the creation of new construction on the building sites labeled “B-D” along Dózsa György Road are

- a) the transformation of the lane of Dózsa György Road next to the area into a bus lane;*
 - b) the transferring of the trolley traffic of Ötvenhatosok Square to Dózsa György Road;*
 - c) the creation of a continuous pedestrian/bicycle connection of at least 6 m in width along Dózsa György Road between Heroes’ Square and Ajtósi Dürer Lane;*
 - d) the capacity of the parking structure(s) necessary for the regular use of the development must have at least 800 public spaces, which may only be located underneath the surface at the designated Building Site along Dózsa György Road.*
- (2) The items listed above in paragraph (1) must be completed no later than the completion of the new development.”*

- In the case of the development of the building site along Hermina Road (Hungarian National Gallery – Ludwig Museum) the performance of the following comprises the duty of the Liget Budapest Project:

CITY PARK BUILDING REGULATIONS

“Section 25 The conditions for transportation necessary for the creation of new construction on the building site labeled “A” along Hermina Road are in addition to the number of parking spaces necessary for the regular use of the development, the provision of at least another extra 80 public parking spaces (sufficient for the amount of parking necessary for the Transportation Museum) in the parking structure next to Hermina Road, which must be completed by the completion of the new development at the latest”

IN SUMMARY:

- **In the case of the termination of the transit traffic on Kós Károly Promenade, the conditions set down in the provisions of Section 23 of the City Park Building Regulations must be met;**
- **In the case of the development of the building sites along Dózsa György Road, the developments set down in the provisions of Section 24 of the City Park Building Regulations must be met; and**
- **In the case of the development of the building site next to Hermina Road the developments set down in the provisions of Section 25 of the City Park Building Regulations must be met.**
- **The above related projects must be completed no later than the completion of the new developments, so the scheduling of the projects related to the construction of the museums must be in line with the schedule for the completion of the Liget Budapest Project.**

In conclusion, it can be established that the planned interventions in the World Heritage area will typically assert a positive impact (reduction of traffic, balancing of burdens, etc.), and the direct or

indirect negative impact can be counterbalanced by supplemental investments that are defined within the adopted plans or that comprise a part of the project. Furthermore, the easing of the burden on Kós Károly Promenade will exercise a favorable impact on the examined area of the World Heritage site as well as the section extending to Oktogon on Andrásy Avenue forming a part of the Budapest World Heritage site, that is, a reduction in traffic burden and its positive impacts go beyond the examined area of the World Heritage site.

APPENDICES

Planned interventions in the working sections supporting the City Park Building Regulations adopted on 30 June 2014 and its updated version dated on 10 June 2016. The recommendations serve to underpin the resolutions in the City Park Building Regulations.

1. TRANSPORTATION AND ACCESS²⁷

The planned development affects several elements of structural significance to the transportation system of Budapest, which impact the accessibility of the City Park or the transportation within its territory.

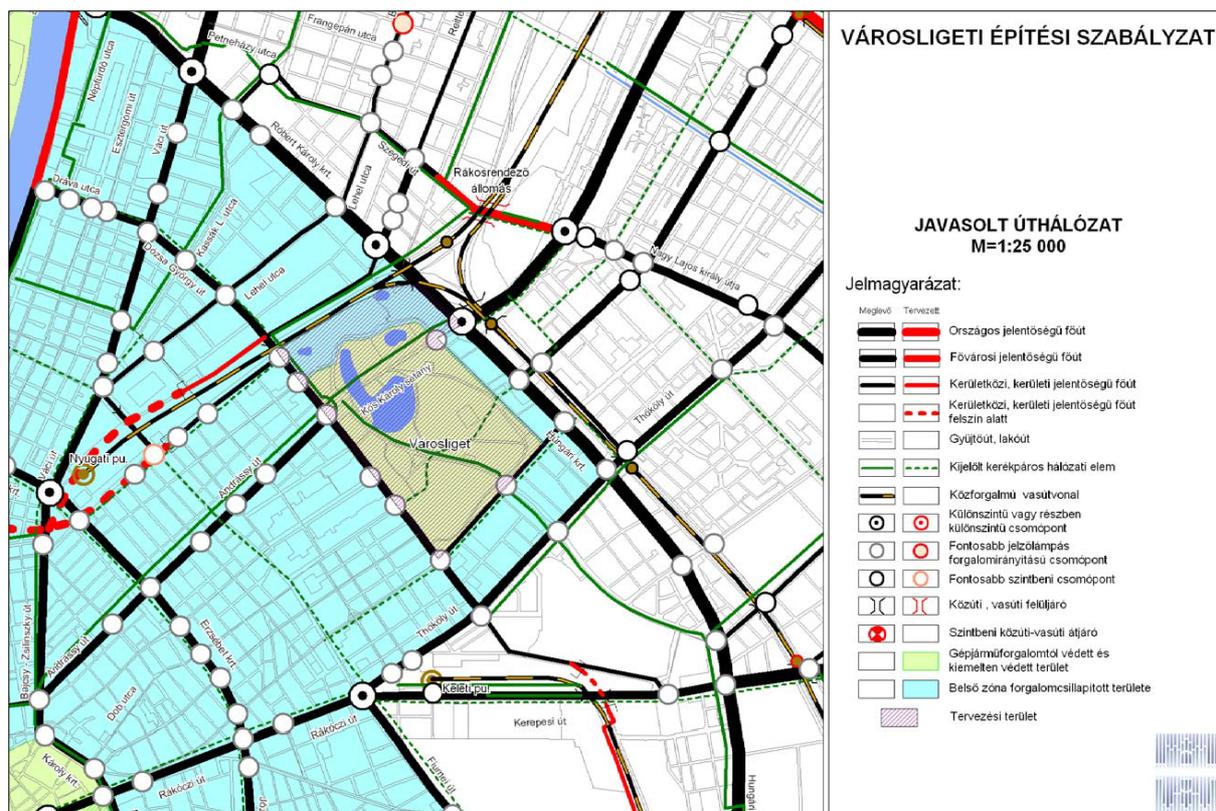


Figure 91 | Recommended road network

Legend:

Main road of national significance - *Országos jelentőségű főút*

Main road of metropolitan significance - *Fővárosi jelentőségű főút*

Main road of inter-district or district significance - *Kerületközi, kerületi jelentőségű főút*

Underground main road of inter-district or district significance - *Kerületközi, kerületi jelentőségű főút felszín alatt*

Access road, residential road - *Gyűjtőút, lakóút*

Designated bicycling network element - *Kijelölt kerékpáros hálózati elem*

Public railway line - *Közforgalmú vasútvonal*

Multi-level or partially multi-level interchange - *különszintű, vagy részben különszintű csomópont*

Major intersection controlled by traffic lights – fontosabb jelzőlámpás, forgalomirányítású csomópont

Major at-grade intersection – fontosabb szintbeni csomópont

Public road or railway overpass - *Közúti, vasúti felüljáró*

At-grade public road railway crossing *Szintbeni közúti-vasúti átjáró*

Area with protection or heightened protection from automobile traffic- *Gépjárműforgalomtól védett és kiemelten védett terület*

Inner zone traffic reduction area – *Belső zóna forgalomcsillapított területe*

Planning area - *Tervezési terület*

27 Excerpt from the City Park Building Regulations (source: www.budapest.hu / 03_1_Alatamaszto.pdf)

1.1 NETWORK LINKS

1. The extension of the Millennium Underground Railway line is included in the plans dealing with Budapest's urban and transportation development... [...] ...The construction of a new station on the existing section of the line at Hungária Boulevard is planned as a part of its modernization and renovation. This new station providing a transfer point from the tram along Hungária Boulevard would be constructed directly adjacent to the territory of the City Park, and would also favorably affect its accessibility...
2. From the standpoint of the City Park, the network significance of the Millennium Underground that cuts through it is that it provides underground subway-type service between the downtown of Pest and the Zugló district.
3. The overall city plans dealing with the development include the closing of Kós Károly Promenade to automobile traffic, which is the section through the City Park of the main traffic route comprised of the feeder section to the M3 expressway and Andrásy Avenue. The closing would affect public road automobile traffic in a detrimental manner, however, the disruption to the City Park's natural and built assets would cease...
4. The territory of the City Park is bordered on its northern and eastern sides by the four railway lines (from Vác, Veresegyháza, Esztergom and Cegléd) leading to Nyugati Station. As a part of their development the construction of new stations are also planned at Dévényi Road and Mexikói Road. The goal of the construction of these new stations is to create transfer opportunities with the urban fixed-route transportation lines (the Millennium Underground and the Hungária Boulevard tram). From the standpoint of the City Park the network significance of the railway lines is that through new stations – along with a major walking distance – the area is made directly accessible for primarily the Central Hungary region that plays a significant role in the railway traffic into Budapest.

1.2 DEVELOPMENT OF PUBLIC TRANSPORTATION

5. Objective: the key role of public transportation in the service of the City Park area must be maintained in the future, when possible with the preference for capacitive fixed-route and environmentally sound electrically driven vehicles... [...] ...The users of public transportation have crucial significance in terms of the institutions located in the City Park and the visitors to the park. The cultural institutions to be created during the implementation of the *Liget Budapest Development* are expected to increase the number of visitors to the City Park by a figure of approximately 4,000 people/day.

The increase in traffic will not cause a genuine change in the burden on the public transportation system, since typically it will not occur during the morning and evening weekday rush hours that are the benchmark for traffic burden in the capital, but instead during the intervening daytime periods and on weekends.

6. As a result of the public transportation service to the area of the City Park by the Millennium Underground Railway, the mass transit lines on Dózsa György Road (busses 20E, 30, 30A, 105 and 230 and trolleys 75 and 79), the Hungária Boulevard tram (1-1A) and the bordering and connecting trolley lines (70, 72 and 74) a favorable level of service is provided presently and will be in the future as well.
7. The recommendations related to the elements of public transportation affecting the area of the City Park is not justified or necessary due to an increase in demand, but instead due to the modifications to the road network related to peaceful park use.
8. The current expected modernization and replacement of vehicles of the Millennium Underground – as a result of its most recent renovation in 1995 – falls favorably at the same time as the planned implementation of the Liget Budapest Project. During the modernization a new station will be created at Hungária Boulevard, providing a transfer point from tram line number 1. This is a favorable change from the standpoint of the City Park as well, since access to the area will be served by a third, Hungária Boulevard station in addition to those at Heroes' Square and the Széchenyi Baths.
9. The designation of a bus lane on the City Park side of Dózsa György Road is also recommended – similar to that on the District VI-VII side – as well as the shifting of the Olof Palme Road trolley traffic to here. The modification to the trolley route is in part due to the nearly 400 m shortening of the route in relation to Stefánia Road/Vágány Street, and in part due to the fact that it will reduce vehicular traffic – even if it is an environmentally-friendly public transportation vehicle – in the territory of the park and on Heroes' Square.
10. Due to the current technological level of the vehicles, the new routes along Dózsa György Road will not require the installation of overhead lines in the section in front of Heroes' Square, which would be detrimental from the aspect of the cityscape.
11. The distance between the new stop recommended at the Múcsarnok Art Gallery and the existing stop in front of the Museum of Fine Arts is only 300 m.
12. It is recommended to maintain the route of the trolley running on the Dvorzsák Promenade-Zichy Mihály Road line unchanged, since if it was to run outside the park it would result in an addition of 800 m to its route.
13. If there is demand within the territory of the City Park, then an electric midibus line could be developed and run as well to connect the cultural institutions.

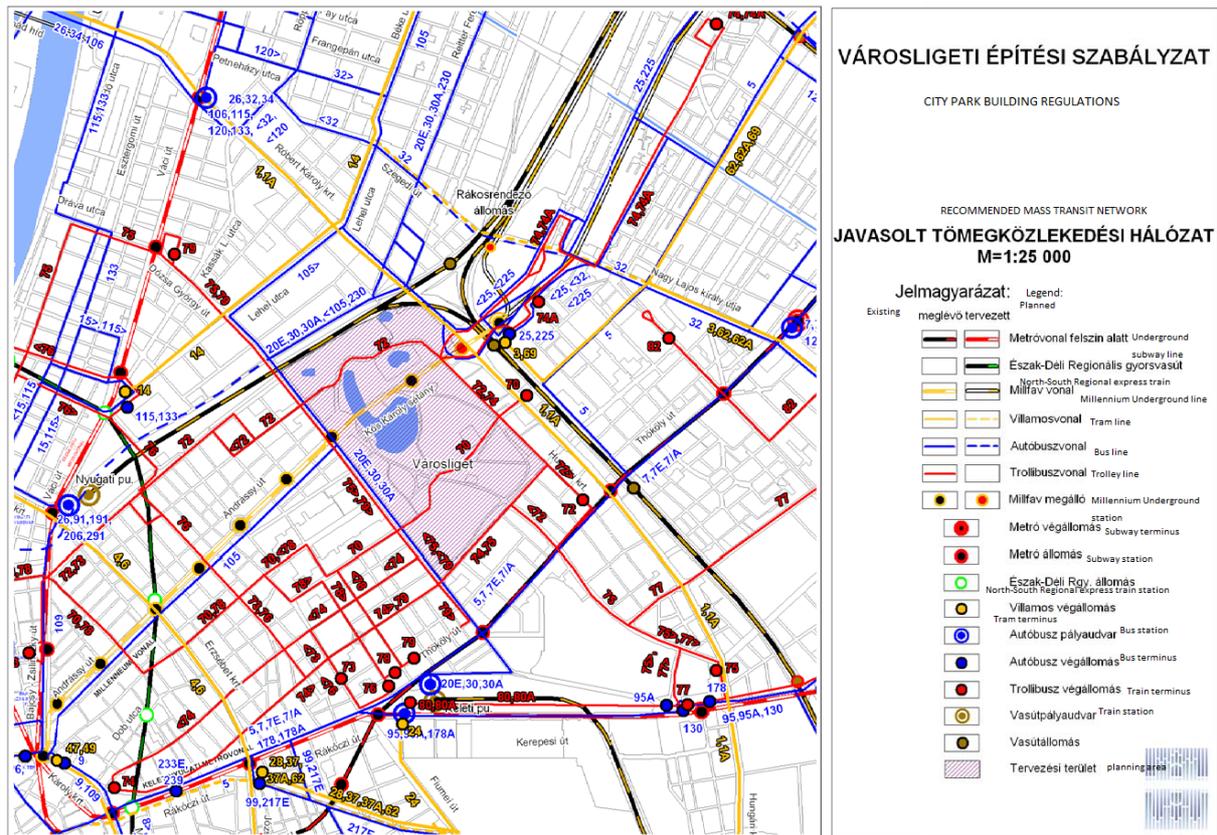


Figure 92 | Recommended mass transit network

1.3 DEVELOPMENT OF RAILWAY TRANSPORTATION IN THE AREA BORDERING THE CITY PARK

14. As a part of the development of the national transportation system, the renovation of the railway network is underway, and accordingly this also affects the railway network of Budapest. The renovation of the four lines running into Nyugati Station will take place in two phases – I/a and I/b... [...] ...In addition to the reconstruction of the track network, according to the plans a new station will be built to create a transfer point for Hungária Boulevard (tram number 1) at Dévényi Street – through the reclaiming of the present-day Rákosrendező train station – named Lóportár dűlő... [...] ...In connection with the renovation of the line a new station is planned at Kacsóh Pongrác Road, primarily to create a transfer link with the Millennium Underground, and secondly to expand the transfer link at Hungária Boulevard (tram number 1), which is also presently provided by the Zugló train station at Thököly Road...

1.4 DEVELOPMENT OF PUBLIC ROAD TRANSPORTATION

Objective: the reduction of the environmental burden caused by automobile traffic in the territory of the City Park in such a way that the public road transportation of the capital is not put in a worse situation than the present...

1.4.1 DEVELOPMENT OF THE PUBLIC ROAD NETWORK, THE CLOSING OF KÓS KÁROLY PROMENADE

Significant traffic towards the downtown clogs Kós Károly Promenade and Állatkerti Boulevard during morning rush hour ... [...] ...The discontinuation of Kós Károly Promenade as a main traffic route (its effective closing) must be accompanied by a reduction in traffic on Állatkerti Boulevard (preventing transit traffic), since the environmental burden on the City Park is the objective to be achieved. The morning traffic running through the City Park that comes almost exclusively from the M3 expressway would primarily be diverted through Hungária Boulevard to Vágány Street and Ajtósi Dürer Lane, which would result in so much additional traffic that they could not handle it in their present forms. The construction of public road sections necessary for the organization of this additional traffic, and in particular the development of the necessary intersections would not be acceptable from an environmental standpoint both due to their need for space and their impact on the environment.

On the basis of the traffic model prepared within the context of the feasibility study for the *M1 Millennium Underground Railway Modernization and Extension*, the closing of Kós Károly Promenade and the reduction in traffic on Állatkerti Boulevard (the elimination of transit traffic) could only be implemented in such a way that Budapest's public road transportation situation in the area would not deteriorate through the burden reducing effect of further transportation interventions and improvements performed at the same time.

The improvements taken into account in the traffic model – in addition to the closing of Kós Károly Promenade and the reduction in traffic on Állatkerti Boulevard – are as follows:

15. In the interest of protecting the residential function in its vicinity, the Reitter Ferenc Street – Mór Street intersection will not be developed. The intersection can only be burdened to the capacity provided by its present geometric form.
16. The separated-level interchange between Szegedi Road and Nagy Lajos Király Road could in the future further reduce the burden on the parallel section of Hungária Boulevard.
17. The cross-section of Vágány Street will be widened to 2x2 traffic lanes.
18. An entrance fee for passenger traffic will be introduced, the boundary of which in the planning area will be the Hungária Boulevard ring. As a result of the entrance fee the traffic heading to the interior of the ring will decrease by 20%.

19. To reduce the traffic arriving from the feeder section of the M3 expressway a 600 parking space P+R system lot will be created in the vicinity of Mexikói Road. To counterbalance the loss of P+R parking due to the elimination of the surface parking at Ötvenhatosok Square a further 400 parking space P+R system lot will be created in the vicinity of Mexikói Road.
20. The entire planning area will be a restricted parking zone, due to which P+R type parking will be terminated... [...] ...

1.4.2 NECESSARY IMPROVEMENTS TO THE INTERSECTIONS OF THE ROADS BORDERING THE CITY PARK

With the closing of Kós Károly Promenade and the reduction in traffic on Állatkerti Boulevard (the elimination of transit traffic) – assuming the full implementation of the requirements taken into account in the traffic model – the following modifications and improvements to the intersections of the surrounding road network are necessary:

21. In the case of the Reitter Ferenc Street – Mór Street intersection, in the lanes on Reitter Ferenc Street coming from the ring boulevard to Mór Street it is necessary to designate an independent lane going straight and an independent right turn lane in place of the current lane going straight and the straight/right turn lane.
22. At the intersection of Dózsa György Road and Andrásy Avenue, two independent left turn lanes on Dózsa György Road coming from Ajtósi Dürer Lane must be established to carry the traffic turning left onto Andrásy Avenue (on the basis of the capacity calculations one turn lane would be sufficient, but due to the short distance between intersections the alignment of the vehicles would not be ensured in this way),
23. and furthermore on Andrásy Avenue coming from Oktogon Square the current right turn and joint right turn/left turn lanes should be altered to a left turn lane and a left turn/right turn lane.
24. At the Dózsa György Road and Ajtósi Dürer Lane intersection on Ajtósi Dürer Lane coming from Stefánia Road two independent right turn lanes must be created to handle the traffic turning right. The necessary capacity for the handling of the arising traffic demand can be ensured by altering the regulation of the intersection's traffic light to have three phases.
25. At the intersection of Hungária Boulevard and Ajtósi Dürer Lane, the existing independent right turn lane onto Ajtósi Dürer Lane on Hungária Boulevard coming from the direction of the Kacsóh Pongrác Road overpass – with the creation of an appropriately rounded curve – must be removed from the regulation of the traffic light.

26. At the intersection of Róbert Károly Boulevard and Reitter Ferenc Street (Vágány Street) the introduction of traffic regulation with a traffic light (primarily at the junction of Vágány Street) is necessary because two turn lanes must be created for traffic turning right from Vágány Street towards the Kacsóh Pongrác Road overpass.
27. At the intersection of Vágány Street and Mohács Street a modification of the geometry is justified. Its remodeling into a roundabout is recommended.
28. Construction interventions are not necessary at intersections of the surrounding road network not listed above. Naturally the traffic regulation by traffic lights at all of the intersections of the road network will be altered in accordance with the demands of the changing traffic flow ... [...] ... On the basis of the ability of the intersections to allow traffic passage it can be established that despite the significance of the specific transportation development interventions for the closing of Kós Károly Promenade and the reduction of traffic on Állatkerti Boulevard (the elimination of transit traffic), the capacity of several of the intersections of the main road network surrounding the City Park is nearly at 100%, so significant reserve capacity cannot be ensured.

1.4.3 RECOMMENDATIONS CONCERNING THE ALTERATION OF SURROUNDING ROADS

29. Hungária Boulevard only skims the territory of the City Park for a short section, and a modification in the cross section of this main traffic route with great significance to transportation in Budapest is not recommended in connection with the City Park development.
30. It is necessary to maintain the current 2x3 lane cross section of Dózsa György Road, but the designation of a bus lane is recommended in accordance with the section on public transportation development.
31. Presently, one and a half traffic lanes of this traffic route as well as the area providing space for the traffic signs, traffic lights and public lighting necessary for its safe operation are located within the lot of the park, in the section between Heroes' Square and Ajtósi Dürer Lane. The settlement of the lot of the public road is recommended, and the zoning boundary representing the border of the public road area has been appropriately established in the working section to be approved.
32. In the case of Ajtósi Dürer Lane, in addition to the 2x2 traffic lanes ...[...]... the creation of bicycle lanes on both sides going in the proper direction and the retention or designation of a parking lane parallel to the axis of the road on the developed side is recommended.
33. Vágány Street does not border the territory of the City Park, and therefore is not a part of the planning area, but due to the planned closing of Kós Károly Promenade and the reduction in traffic on Állatkerti Boulevard it is of key importance. The recommended infrastructural elements of the cross section of this main traffic route are the same as those that appear in the urban design plan

being prepared for the areas connected to District XIII, and have been supplemented by the bus parking lane serving the visitor traffic to the City Park defined in the Parking section.

34. The exclusion of transit traffic in the section of Állatkerti Boulevard between Gundel Károly Road and Hermina Road is recommended with the exception of public transportation and bus traffic, along with the narrowing of the cross section of the public road... [...] ... being taken into account.
35. The current cross section of Hermina Road with separated lanes and parking lanes on both sides is appropriate, and its modification is not recommended.
36. The public road section of Varannó Street in front of the Toxicological Institute – following the institute being moved to a worthy location and taking into account the need for access to the railway areas – can become a part of the territory of the Budapest Zoo and Botanical Gardens, since its exclusive function is to provide for service traffic to the Budapest Zoo and Botanical Gardens... [...] ...

1.4.4 RECOMMENDATIONS CONCERNING THE PARK'S INTERNAL ROAD NETWORK

37. The exclusion of regular automobile traffic on the roads comprising the park's internal road network is recommended, with the exception of Zichy Mihály Road and Dvorzsák Promenade, which provides a connection for trolley traffic between Damjanich Street and Erzsébet Királyné Road. With the termination of Kós Károly Promenade's role as a main traffic route the part it played in public road transportation is completely lost... [...] ... It is recommended that Városligeti Boulevard be extended to Dvozsák Promenade and Állatkerti Boulevard for the creation of a closed internal road network of sufficient density. In the case of the 13-14 m wide elements of the internal road network, the reduction of the pavement width to 8 m is recommended. The reasonable modernization of the size of the paved surfaces to conform to their function will reduce their area within the park by nearly 20,000 m² in favor of green space.

1.5 RECOMMENDATIONS CONCERNING THE DEVELOPMENT OF BICYCLE TRANSPORTATION

38. ...The road network serving the City Park in this way would make it suitable for cycling, ensuring a connection with the bicycle infrastructure bordering the City Park and the connecting routes. The recommendations made as a part of the public road development for the reduction in traffic on Állatkerti Boulevard and the planned termination of Kós Károly Promenade's role in the network of main roads are completely in line with this objective. Furthermore, on the basis of the recommendation in the Parking section, the territory of the park would be free of surface parking and the automobile traffic connected with that.
39. Within the territory of the park, according to the Environmental Remodeling recommendation, the traffic routes must be developed taking into account the demands of bicycle traffic during

their reconstruction and renovation that has been needed for a long time from a technical perspective.

40. From the standpoint of bicycle transportation, the closed network of the park must be linked to the bicycle infrastructure of public spaces connected to it – Stefánia Road and Andrásy Avenue – and the public spaces surrounding it – Ajtósi Dürer Lane and Dózsa György Road.
41. Only in the case of Kós Károly Promenade, which is losing its role as a main traffic route, is it worth considering independent bicycling infrastructure in the park, since the Budapest metropolitan regional development plan recommends the creation of the national cycling main path network element 3.A. Budapest – Fót defined in the National Regional Development Plan on this route.
42. According to the pertinent legal regulation, a standard number of bicycle parking racks must be installed for establishments affected by regular bicycling traffic, as well as in public spaces in a number appropriate for the local characteristics.
43. As a part of the MOL Bubi public bicycling system that began operations in 2014, bicycle pick-up stations that also serve the City Park have been created at three intersections along Dózsa György Road (Andrásy Avenue, Városligeti Avenue and Dembinszky Street) and next to the Széchenyi Baths. As a part of the implementation of the *Liget Budapest Development* project it is recommended that the system be supplemented with the creation of another pick-up station at the Transportation Museum.

The metropolitan bicycling network development conceptions count on the creation of interlinked bicycling infrastructure in the elements of the main road network that surround and are in the vicinity of the City Park (that are not a part of the planning area).

In accordance with this, it is expected that the following will be created:

44. bicycle lanes going in the proper direction on both sides of Ajtósi Dürer Lane,
45. bicycle lanes going in the proper direction on both sides of Dózsa György Road (Andrásy Avenue to Ajtósi Dürer Lane), or due to the existing rows of trees, a bicycle lane taken from the pedestrian area on the District VI-VII side, and
46. a bicycle lane on Vágány Street on the District VI side – due to the planned bus parking lane – next to the pedestrian sidewalk, while on the District XIII side a bicycle lane going in the proper direction.

1.6 DEVELOPMENT OF PEDESTRIAN TRAFFIC

47. Objective: as a part of the development of the green space in the park and integrated into the cultural function of the built environment along Dózsa György Road, pedestrian traffic is the stressed preference in the City Park. The recommendations for the reduction in traffic on Állatkerti Boulevard and the planned termination of Kós Károly Promenade's role in the network of main

roads as a part of the development of the public road network is in full accordance with the above objective.

48. Automobile traffic on Állatkerti Boulevard will be reduced through the exclusion of transit passenger automobile traffic. With the partial elimination of surface parking – the development of parking spaces parallel to the axis of the road is recommended in place of the existing perpendicular parking – a 5 m wide strip can be freed up, which can be utilized to increase paving for pedestrian traffic and green space.
49. The internal part of the park territory will be free of surface parking and the related automobile traffic, since the necessary parking spots will be ensured in underground parking garages and parking ramps.
50. Trolley traffic will be relocated from Olof Palme Promenade to Dózsa György Road, reducing the length of roads affected by public transportation traffic.
51. The internal road network of the park will be divided into routes that can also be used by bicycle traffic and paved paths exclusively for pedestrian traffic.
52. The creation of a 6-10 m wide promenade serving pedestrian and bicycle traffic from Heroes' Square to Ajtósi Dürer Lane in the area in front of the new institutions along Dózsa György Road is recommended.
53. The development of Heroes' Square into a fully pedestrian area together with the termination of the main road network role of Kós Károly Promenade is recommended, considering that Heroes' Square is one of Budapest's most impressive public areas, as well as being a National Memorial Site. Its transformation into a pedestrian area will be determined to a significant extent by the built environment of the neighboring Museum of Fine Arts and the Múcsarnok Art Gallery.
54. The consolidation of the areas of the Budapest Zoo and Botanical Gardens and the closed Amusement Park makes the closing of the pedestrian section of Varannó Street necessary from unified development, property protection and security aspects.

1.7 PARKING

Objectives related to parking can be defined by the following:

55. within the territory of the park surface parking that requires a great deal of space will be eliminated in favor of an increase in pedestrian areas and green space,
56. the parking spaces necessary for the proper use of the individual institutions will be located in underground garages and replaced on the perimeter of the City Park,
57. with the introduction of the restricted parking zone the P+R type parking that is alien to the area will be eliminated and be replaced outside the area.

58. According to the Conditions Assessment, currently nearly 2,350 surface parking spaces can be found on the territory of the City Park and on its surrounding roads. In addition to the visitor traffic, the use of these spaces is significant for residential parking connected to District XIV and neighboring Districts VI and VII, as well as P+R parking. During the implementation of the *Liget Budapest* project, according to the factors appearing in the *Parking Statement*, a number of parking spaces – reduced by a difference of 40-60-90-100% on the basis of function and location – is recommended for proper use, taking into account public transportation opportunities and rider habits.
59. It is recommended that the parking demand for the park and for the individual institutions be ensured through the creation and operation of a unified parking management system (with the exception of the more expensive surface parking lots, it will be possible to make use of the individual parking structures under identical terms for the destination traffic of any institution).
60. On the edge of the territory of the former Amusement Park, next to the interchange created by Hungária Boulevard and the feeder section of the M3 expressway – taking into account the visitor traffic arriving from the exterior areas of the city and beyond the city – the creation of a nearly 600 space parking ramp is recommended (the construction of an underground garage is in part hindered by water conservation regulations, and its maximum capacity can be determined to be 1,000 spaces taking into account the traffic conditions).
- The capacity of this recommended 5 level parking structure to be located in an optimal location from the standpoints of both access and protection of the park will ensure parking for the renovated Budapest City Circus and the existing Széchenyi Medicinal Baths and Swimming Pool in addition to the demands of the Budapest Zoo and Botanical Gardens expanded by the inclusion of Pannon Park.
61. At the same time as the construction of the parking ramp, surface parking must be eliminated to a significant extent on Állatkerti Boulevard (290 spaces) and completely on the minor roads connected to it (85 spaces) to protect the recreational function based on the park. It is recommended that no more than 100 surface parking spaces be maintained on Állatkerti Boulevard – for the most part to serve the needs of the handicapped – and furthermore a restricted parking zone be introduced, as a result of which the P+R function resulting from the current free parking will be eliminated.
62. The construction of a 440 space underground garage is recommended next to Hermina Road, easily accessible to those arriving from Hungária Boulevard, in connection with the museum development projects planned there... [...] ...
63. At the same time as the construction of the underground garage, the elimination of the 170 surface parking spaces within the territory of the park on Városligeti Boulevard and the

introduction of a restricted parking zone is recommended, as a result of which the P+R function currently provided by the free parking on Hermina Road will be eliminated, and due to this the residential parking situation next to Hermina Road will become more favorable.

64. There would be a need for a nearly 500 space underground garage for visitor traffic and an independent 150 space underground garage for the needs of the workers to be constructed in place of the surface parking spaces to be eliminated on Ötvenhatosok Square next to Dózsa György Road. At the same time as the construction of the underground garage serving the needs of the visitors... [...] ..., the surface parking affecting the area of the park must be eliminated along Ajtósi Dürer Lane and in the area of Kós Károly Promenade.
65. To compensate for the role in residential parking of the surface parking to be eliminated on Ötvenhatosok Square it is recommended that the underground garage serving visitor traffic be opened during the nighttime hours (at least from 3:00 p.m. to 9:00 a.m.). Furthermore, the capacity of the underground garage... [...] ...is recommended to be determined at a minimum of 600 spaces, taking into account the lack of residential parking;
66. and furthermore, with the objective of the preservation of Budapest's current transportation quality level, to replace the P+R parking role of the site it is recommended that a capacity of at least 400 parking spaces be created in the vicinity of Mexikói Road, in connection with the Millennium Underground...
67. The recommended parking spaces in connection with the park will also provide for the demands of the Budapest Ice Skating Rink, taking into account the opposing annual cycles of park use and winter sports.
68. It is recommended to retain the parking that exists for the visitors to the Museum of Fine Arts and the Múcsarnok Art Gallery on their sides towards the park – as a part of a restricted parking zone – which will ensure surface parking in the future with about 50 spaces each. These same surface parking lots can play a role in the parking for the restaurants here in the evening hours. The creation of an independent building lot for the Múcsarnok Art Gallery is underway, which if this decision is made (it is not included in the present program) it will make it possible to create an independent underground garage underneath the area of the current bus parking lot, thus providing parking within the building lot. The capacity of the underground garage could possibly meet the demands of both the Museum of Fine Arts and the Múcsarnok Art Gallery.

The number of parking spaces currently available on the territory of the City Park and on the surrounding roads – 2,350 – will not in essence change during the implementation of the development program, which taking into account the 400 P+R parking spaces recommended at Mexikói Road will be 2,340 spaces (not including the residential parking on Hermina Road to be made into a restricted parking zone)...

69. ...For the tourist bus traffic related to the City Park only the creation of pick-up and drop-off locations for short term stopping can be recommended within the area.
on Állatkert Boulevard at the Széchenyi Baths and at the main entrance to the Budapest Zoo and Botanical Gardens,
on Dózsa György Road at the Múcsarnok Art Gallery, and
on Hermina Road at the New National Gallery.
70. For bus storage (parking providing for at least a 1-6 hour stay) the creation of a bus parking lane outside the planning area on Vágány Street is recommended (with appropriate infrastructure such as a toilet, washroom and snack bar). The remodeling of the public road cross section, while also taking into account the development conceptions for the District XIII side of Vágány Street, would make it possible for more than 20 buses to wait here at one time. One terminal per site must be created for tourist bus arrivals and departures serving the travel needs of the population of Budapest at a point in the city suitable for this, if possible in connection with a subway station. The Vágány Street bus parking lane is not suitable for this aim, taking into account its linear shape, the restricted mass transit links of buses and trolleys and the opportunities for passenger car parking.

2. ENVIRONMENTAL BURDEN²⁸

ENVIRONMENTAL PROTECTION RECOMMENDATION

2.1 RECOMMENDATIONS CONCERNING SOIL AND WATER CONSERVATION

71. The conservation of ground water must be ensured in accordance with the recommendations contained in the *City Park Water Conservation Impact Assessment*.²⁹ On the basis of the area's geological composition as well as the known hydrogeological conditions it is primarily for the protection of the water of the upper strata that all activity in the area of the park should be avoided that could endanger or pollute the waters near the surface. Water coming from pavement used by automobiles must be led to conduits through oil trapping structures, and their deep-well disposal is prohibited. In this manner, the pavement in areas with regular automobile traffic must be impermeable (this naturally is the restriction of soil life at the same time). Due to the high salt content of the used thermal waters they are not particularly suited for irrigation, so they are not to be used for this purpose (the renovation of the lakebeds would help to a great extent in isolating the presently leaking sulfate-rich and carbonic waters from the ground water near the surface). The ground water's ability to move must be ensured, with particular attention to the planned below surface structures. These must collect the ground water with filters on the headwater side and, based on the characteristics of the given area, be conducted on in a planned manner. During the construction activities in the area the exposed pollutants must be eliminated properly, alongside appropriate specialized official supervision.

2.2 RECOMMENDATIONS CONCERNING WASTE MANAGEMENT

72. The treatment of waste arising from regular operations must continue to be ensured within the functioning municipal system. The use of the significant amount of organic manure produced on the territory of the Budapest Zoo and Botanical Gardens for energy production is particularly justified with a view to the use of exemplary, climate-friendly technologies. A part of the planned modifications in the area begin with demolition. Heightened attention must be paid to the expert disposal of demolition waste and the reduction of the creation of dust expected in these cases to protect air quality.

²⁸ Working section supporting the City Park Building Regulations (source: [www.budapest.hu / 03_1_Alatamaszto.pdf](http://www.budapest.hu/03_1_Alatamaszto.pdf))

²⁹ The working section supporting the City Park Building Regulations on the City Park's water conservation impact assessment: source: <http://infoszab.budapest.hu:8080/Hirdetmenyek.aspx> : 03_2_Alatamaszto_mr_melleklete_1 (1).pdf, 03_3_Alatamaszto_mr_melleklete_2 (1).pdf, 03_4_Alatamaszto_mr_melleklete_3 (1).pdf

2.3 RECOMMENDATIONS CONCERNING PROTECTION AGAINST NOISE LOAD

73. The noise conditions of the area will be transformed by the rearrangement of traffic. Vehicular traffic on Kós Károly Promenade and Állatkerti Boulevard will be eliminated or restricted, so significant noise load will no longer be expected there. Through the planned suburban railway improvements (the modernization of the railway tracks and the stock of vehicles) it is expected that already in the near future the amount of railway noise load will be reduced in the area of the Budapest Zoo and Botanical Gardens. The restriction of traffic on Állatkerti Boulevard (the prevention of transit traffic) will reduce the noise load to a significant degree on the interior part of the area. Kós Károly Promenade, which bisects the territory of the City Park and has significant traffic, will be closed to transit traffic for the long term. The transportation role of the route will be taken over by Vágány Street and Ajtósi Dürer Lane.
74. In addition to the reduction in traffic, passive acoustical protection is also necessary. In the expansion area of the zoo both the noise pollution from the railway and from Hungária Boulevard can be moderated through the construction of a noise shielding wall. Noise shielding is particularly justified in the case of the overpass. Here the noise impact can be moderated primarily through the construction of a noise shielding wall. In addition to this, the Biodome planned here will, as an enclosed space, further improve the protection of the area. The open-air and more sensitive functions will in general be placed further from the overpass. The noise load limit to be complied with is contained in KvVM-EüM Decree 27/2008 on the Determination of Environmental Noise and Vibration Load Limits.

2.4 AIR PROTECTION

75. In the short term the restriction of traffic on Állatkerti Boulevard will improve the air quality of the surrounding areas to a minor degree. At the same time this does not influence the degree of boundary pollution. In the long term the direct air pollution will also be further moderated through the reduction in traffic on Kós Károly Promenade, while the redirection of this traffic to Vágány Street and Ajtósi Dürer Lane increases the burden.
76. In the expansion of the zoo the environmental burden of Hungária Boulevard must be taken into account, and therefore it is practical to locate the open-air and more sensitive functions further from the overpass from an air quality standpoint as well.
77. The limits in force in VM Decree 4/2011 on the Limits on the Level of Air Pollutants and Emission Limits of Air Polluting Point Sources Linked to the Area are to be observed.

3. PARK DESIGN³⁰

78. The City Park is a green space of outstanding significance to Budapest from the aspects of history, tradition and use. The role it fulfills in the urban structure and the system of metropolitan green spaces has also been significant in the past, and today it is one of the city's largest and best-known public parks. In addition to its function as an urban public park its role in tourism and the representation of the city has always been crucial.

79. Similar to the People's Park, the City Park's registration as a historic garden is recommended. Its former design as an English landscape garden can still be traced today. The structure of the park and the routes of the walking paths even today reflect in part the appearance of its past design. One of the most appropriate methods to preserve the character-defining elements of the park would be to designate the area within the heritage preservation category of a historic garden. This protection would not make the park's development or the construction of new institutions impossible, either.

Within the context of the Liget Budapest program significant institutions will be placed within the territory of the City Park. Due to the City Park's significance to cultural history, recreation and urban ecology the objective of the design concept has first and foremost been for the planned institutions to affect the existing green spaces, the stock of plants (in particular valuable individual trees), the outstanding elements of garden architecture (e.g. the Rondo) and the park functions as little as possible. Consequently, the planned institutions have typically been located on paved areas or on the plot of existing building.

80. Within the framework of the City Park Revitalization Program, there is an opportunity for the full renovation of the park as well, alongside the planned construction. During the elaboration of the landscape design recommendation, we focused on ecological, green space and landscape preservation interests while taking into account the various limiting factors. The comprehensive renovation of the City Park's overcrowded stock of trees according to a landscape architecture plan with acceptance from professional civic organizations representing the population is recommended, extending to the density, configuration and species composition of the trees. Presently there are several areas within the park that are in need of renovation. The furnishings in the territory of the park are also in need of renovation or replacement. In the interest of the unified appearance of the park, the furnishings (benches, trash cans, drinking fountains, notice boards, informational signs, etc.) should be designed and placed on the basis of a landscape design competition.

30 Working section supporting the City Park Building Regulations (source: www.budapest.hu / 03_1_Alatamaszto.pdf)

ENVIRONMENTAL DESIGN OF THE CITY PARK

RECOMMENDATIONS FOR THE DEVELOPMENT OF GREEN SPACE ALONG DÓZSA GYÖRGY ROAD

81. The strip of parking along Dózsa György Road is presently managed at a level below its value and today it has no representational character. Along with the construction of the planned new cultural institutions there is also an opportunity to design representative spaces and systems of spaces. In addition to all this, alongside the placement of the new buildings, it is most important that the strip of land in question must be reconnected to the territory of the park. The green space relationship with the interior areas of the park must be ensured at the main points of access. At the same time, these areas have a significant role as buffer zones protecting the interior green spaces of the City Park. The design of the museum buildings provides an important opportunity to move out towards the promenade with restful gardens or terraces with guest services. The external green space areas surrounding the buildings are parts of the City Park, and their permanent or temporary separation is not recommended. The design of a new promenade with significant green space is recommended through the removal of the paved surface. It would be appropriate to arrange the promenade that is to be created above the planned underground garage with a series of spaces with different functions. The construction of water features (e.g. pools and fountains) at the crossings of walking paths and promenades could contribute greatly to the revitalization and increase in value of this southern section. Along with the design of the areas along Dózsa György Road, is the arrangement of the surroundings of the Regnum Marianum Monument.

RECOMMENDATIONS CONCERNING THE RECONSTRUCTION OF THE RONDO

82. ...In the structure of its current state, the City Park still today in part preserves the recommendations concerning its creation from the Heinrich Nebbien plan. With the creation of the parade square this significant unit of landscape architecture was damaged, one third of the Rondo fell victim to the remodeling. In the 1820s – according to the original plan – sycamores that are now the age of Methuselah were planted every 6 meters around the outer ring. The spacing of the sycamores standing in a circle with a radius of 80 m is crowded in some places and has gaps in others, but even today reflects the bold concept of the designer. The sycamores are in good condition considering their age, with the diameters of the trunks of these nearly 40 giants being more than 2 meters each. The completion of the missing round path of the Rondo is recommended during the design. At the same time, the completion of the Rondo's ring of trees is not justified due to its restrictive spatial character.

At the same time, the partial, functional reconstruction of the Rondo and the historic path leading around it is recommended, preserving the existing, valuable plants. The walking path will aid in opening up the interior of the City Park and the House of Hungarian Music planned here.

RECOMMENDATIONS CONCERNING THE REHABILITATION OF THE CITY PARK LAKE

83. An important part of the environmental design recommendation is the full reconstruction of the City Park Lake, including the renovation of the lake bed connected with the renovated skating rink, as well as properly and economically ensuring its water base and the maintenance of the lake's biological balance. Since due to the skating rink a permanent cover of water cannot be provided for the lower lake during the winter season, the revitalization of the lake bed must be resolved by a system of dams that make it possible to separate the area of the skating rink in the winter or through the design of a sunken bed lower than the level of the skating rink. In the interest of improving the overall appearance of the park the removal of the gas lines serving the Museum of Agriculture is recommended or their relocation from the dams built into the lake to the connecting bridge. In this manner the continuity and the unity of use of the lake's water surface would not be broken up by the lines surrounded by a wire screen.

RECOMMENDATIONS CONCERNING THE ENVIRONMENTAL DESIGN OF THE HOUSE OF HUNGARIAN MUSIC

It is recommended that the House of Hungarian Music be constructed in the less frequented inner part of the City Park, on the site of the former Hungexpo buildings, taking into account the existing stock of plants, and further from the museums on Dózsa György Road and particularly from automobile traffic. The height of the building must be determined in such a way that it does not exceed the height of the grown trees in the vicinity, and due to this will not impact the view opening of the City Park Lake. Through the opening of a movable section of wall, the stage located within the building can be connected with the exterior environment and the outdoor audience area, which will be integrated organically into the surrounding park area, thereby preserving the valuable stock of trees there.

RECOMMENDATIONS CONCERNING THE ENVIRONMENTAL DESIGN OF THE NEW NATIONAL GALLERY

84. The designated building site affects the Petőfi Hall and its surroundings, so the use of existing green spaces and valuable individual trees is less necessary. The building will be located at one of the City Park's significant historical axes, which the building must reflect. Along with everything, the building complex must face the open space of the Main Square, so that it appears as a space-defining element.

Properly designed exterior spaces are necessary for the museum, which can function as reception areas on the one hand, and on the other hand can provide a site for outdoor programs. The positioning of these could primarily occur on the northern and southern sides of the building, in accordance with the conception of the park and the building. The exterior spaces must be designed so that the stock of trees is retained and valuable individual trees are not affected by the reorganization of the space. Due to the exterior reception space to be designed on the building's northern side, the sports fields, which in any case are in a neglected state, will be eliminated.

85. It is recommended that the sports fields be replaced in the area between Városligeti Boulevard and the veterinarian's office that is to be demolished, taking into account modern recreational demands.

RECOMMENDATIONS CONCERNING THE RENOVATION OF SPORTS AREAS

86. Many of the sports fields of the sports areas found in the park are currently in quite bad condition. Their renovation is recommended by all means for the preservation of the City Park's complex utilization as a public park. The existing sports fields in the section of the park in front of the New Hungarian National Gallery, which in any case are in poor condition, must be moved due to the creation of a reception area of the new institution. It is recommended that the sports fields that are to be eliminated be replaced along Hermina Road. The retention of a portion of the sports fields that are in a northwestern location from the building site is recommended, but their renovation is essential. When the sports fields are renovated or created, attention must be paid to the more recent recreational demands of our times, or rather there must be efforts to provide opportunities for outdoor sports and physical conditioning for every generation.

RECOMMENDATIONS CONCERNING THE DESIGN OF THE RUNNING TRACK

87. The demand has arisen for the creation in the territory of the City Park of a running track modeled on the molded, rubber-surfaced running track on Margit Island. In the creation of the running track the more frequented locations of the City Park (e.g. the areas to the west of Kós Károly Promenade or the areas next to the Vajdahunyad Castle) should be avoided, instead utilizing the section towards Ajtósi Dürer Lane, since the visitors to the high-traffic areas of the park would disturb the users of the running track. The running track must be 2 m wide and created using and redesigning the routes of the existing walking paths and paved roads.

RECOMMENDATIONS CONCERNING THE DESIGN OF THE DOG "AGILITY" PARK

88. Presently there is no place in the City Park designated for the walking of dogs, but dog owners utilize the Király Hill area for this purpose creating environmental use conflicts... According to our recommendation the dog park should be located in a place that disturbs the other park functions less, along Ajtósi Dürer Lane ... [...] ...In addition to this, the placement of dog waste collection bins is recommended to improve the current situation. At the same time, placing informational signs promoting the cultured walking of dogs in public spaces is also necessary.

RECOMMENDATIONS CONCERNING THE RENOVATION OF THE SMALL BOTANICAL GARDEN

89. This area can again become a special patch of color in the City Park through the renovation of the furnishings and pavement, the opening of the closed canopy of foliage, the planting of new, healthy plants and the care for existing plants that are worthy of retention.

RENOVATION OF THE CARD-PLAYERS' GARDEN

90. Through the renovation of this section of the park that is in poor condition (replacement of pavement and furnishings and revitalizing the bushes and plants) it could fill an important role in the functional offerings of the park in the future.

RECOMMENDATIONS CONCERNING THE RENOVATION OF THE STOCK OF PLANTS AND REPLACEMENT OF TREES

91. The culling of the stock of trees in the territory of City Park must always occur on the basis of an individual judgment (ecological risk analysis) ... [...] ...Culling and replacement for the purpose of revitalizing the stock of trees must be planned on a schedule of several years. The number and location of trees to be culled annually as well as the qualitative and quantitative parameters for tree replacement and the location of planting must be determined based on an urban ecological risk analysis.
92. When performing tree replacement the proportion of open grassy and wooded areas must be taken into account. Tree replacement in free, open areas whose character should be preserved, such as the Rondo, the Main Square and Király Hill, is not recommended.
93. Walking paths with historic significance to the park deserve prominent attention as well, and therefore in the interest of the unified appearance of these paths plant species characteristic of the section of the path must be replenished and care must be taken for their scheduled renovation. In general the roads bordering the area and the walking paths of internal structural significance are planted with trees, but the rows of trees have gaps...

RECOMMENDATIONS CONCERNING THE LANDSCAPE ARCHITECTURAL DESIGN OF HEROES' SQUARE AND ITS SURROUNDINGS

94. In the 1920s and 1930s Heroes' Square still had elements of green space. According to the designs of Károly Ráde, the horticultural director at that time, between the two museums one major unit of green space – adjusted to the asymmetry of the square – was designed for each building... [...] ...Presently elements of green space on the square are not found, there is only vegetation in the “front yards”, the entryway areas of the two museums. ... there will be an opportunity [for the placement of new vegetation] in the section of the square in front of the Museum where the traffic lanes will be eliminated. In relation to the use of vegetation, the planting of solitary groups of shrubs characteristic of large ornamental gardens could supplement the existing green backdrop.

RECOMMENDATIONS CONCERNING THE ENVIRONMENTAL DESIGN OF THE ZOO EXPANSION

95. The expansion of the zoo primarily affects the area of the former Amusement Park. Consequently, the expansion of the zoo and the creation of a family adventure park will bring a significant improvement in quality for this presently chaotic, dilapidated area lacking green spaces.

4. CITY PARK BUILDING REGULATIONS UPDATED VERSION ADOPTED ON 10 JUNE 2016



Figure 92

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