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# Isolated Islands?

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RESEARCH ARTICLE

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***Abstract***

*In 2014, Urban Design assignments at the Department of Urban Planning and Design of the Budapest University of Technology and Economics were organised around the topic of the River Danube. Working on its own subject matter, each student study group analysed the situation, relationships and visions for the islands situated in Budapest, later focusing on Népsziget, determining their urban context and possibilities for development. The workshop resulted in several findings related to the subject area. The most significant of these is the realization that, in spite of the special role and position the islands have in Budapest, not only is this uniqueness hard to grasp, but also how difficult it is to put forward as a bold vision for the future. This realization inspired the paper, which, in addition to the summary of the islands unique situation, introduces several international examples, and finally presents the main differences in the approaches of the student's plans.*

***Keywords***

*Islands · Peninsulas · Urban landscape · Recreation*

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## 1 Islands and Settlements

Nowadays, proximity of natural water is extremely valuable for large cities, and this value is further increased by the presence of islands (and peninsulas). The position of islands, the size and shape, their relationship to each other and the mainland changes only slowly over time but with a steady relentlessness, both seasonally and in the long run. The islands themselves alter their image over time and are very sensitive to environmental changes. Their fate is uncertain due to their exposure to change, and this uncertainty is also a part of their beauty and appeal.

The reason some river sections meander and others do not has been known for less than 100 years.

Without going into the details of the theory:

- If the working capacity of the river is higher than the work it has to perform, the river will deepen the riverbed – this is the characteristic of upper courses. Their valleys are generally impassable.
- If the working capacity of the river is equal to the work it has to perform, the river will "regulate" itself; meanders are formed and then cut off. At low water levels, the sediment is deposited and is picked up again during floods. These processes are characteristic of the middle course rivers.
- If the working capacity of the river is not high enough to transport its bedload, deposition takes place, with shoals and islands forming – this is typical of lower river courses.
- If the working capacity of water spreading across the floodplain is virtually none, its bedload is deposited all over the floodplain, resulting in spill streams, and eventually, dry land.

Cholnoky, who answered the aforementioned question [1], wrote that the sections of the Danube that from Komárom until Fajsz have weak middle course type dynamics – as they slowly deposit all the bedload they cannot retain. While from Fajsz, the river flow can be described as middle course type as it has very little bedload and meanders beautifully. According to this, Budapest is situated on the banks of a river section that is in the

weak middle course, rich in bedload and with a high deposition rate. Here, the formation of bars, bars turning into islands and/or becoming attached to the mainland is a natural process of landscape change, which is also highly dependent on the dynamics of the hydraulic regime. [1]

Natural processes were restrained during their usage even before the regulation of rivers. Natural islands long meant safety and isolation for settlers. It is not a coincidence that the "Governor's Palace of the Roman province of Pannonia" was located on Óbudai-sziget (Óbuda Island), while St Michael's Monastery, of the Premonstraterians, from the 13th century, and later the Dominican monastery were situated on today's Margitsziget (Margaret Island). [2] It is also true that until the end of Turkish rule, riverside towns tried to become islands by settling on terraces and surrounding themselves with artificial channels. Whether islands were built up or not depended mostly on the ground level height. Even before the river regulation, the water level fluctuation of the Danube was lower, and its hydraulic regime was more balanced; settlements were only created in areas at low risk of flooding. Of the vegetation zones occurring on riverbanks, riparian forests characterized by oak, ash and elm species indicate that the area was rarely flooded. Cosequently, its higher boundary could be safely used for building without any alterations. Even though shoals and shorelines were in the process of constant slow change, willows on the riverbank indicated the most typical water level at any time.

The steep levees and walls created during water regulation have not only destroyed the zonation of the vegetation, but also prevented the riverbanks from being used freely. This loss naturally placed a higher value on the remaining naturally forming banks and areas, and made them places where the wild romanticism of nature could be experienced – and helped also to turn them into recreational destinations. The importance of unbuilt islands also increased.

This is true, even though, the vegetation of (semi-) natural bank sections and floodplains in Budapest – including islands – is certainly younger than the water regulation. Due to the effects of the water, islands have high vigour and regeneration potential, often raising true primary forests. However, in connection with the serious ecological problem of modern times, they may also be the hotbeds of invasive plant species.

## 2 Islands of Budapest

A total of 11 islands and peninsulas are situated within the administrative boundaries of Budapest, which are very different in size and function. Geographically, only three of these are true islands (Óbudai-sziget, Margitsziget, Csepel-sziget). All the others – Palotai-sziget, Népsziget, Fürdő-sziget, Molnár-sziget, Hunyadi sziget, Szerelem-sziget, Háros-sziget, Kis Háros-sziget – are peninsulas despite the word sziget (island) in their names. [2] The situation was different even two centuries ago. Palotai-sziget (Palotai Island) and the so-called Szerelem-sziget (Love Island) to the south did not exist back then, and at the site of today's' Margitsziget, two smaller, lower-lying islets were located. Népsziget was still a true island and not the peninsula it is now, and who knows what changes will happen in the future through the characteristically slow metamorphosis of islands. However, besides natural processes, their urban context –the quality and quantity of traffic connections, the connection of the mainland to the water, their place in the urban structure, and building conditions – also affects the fate of islands.

Similarly to their shapes, significant differences can also be observed in the usage of the islands. These differences show a strong correlation with the level of flood protection of the islands/peninsulas. Of the islands and peninsulas under examination, only Margitsziget is protected by high-level protective embankments, the others are only partially – or not at all – protected and buildings often have individual protection.

The usage of Margitsziget is the most constant, as it has been used as a recreational, sports and green area for a long time. This function was made possible when the extension of Margaret Bridge (Margit híd) was realized in the late 19th century, and direct pedestrian connection with the mainland was created. After the island had been widened, joined with the then existing Festő-sziget (Painter Island also called Kissziget/Little Island), raised and fitted with new shoreline protection, Margitsziget became an important recreational area of the Hungarian capital. [2,3]

The dynamic industrial development of the 19th century affected the fate of several islands, but it had the most serious impact on the role and urban context of Csepel-sziget (Csepel Island). When choosing the location for the Weiss Manfréd Ammunition Factory (subsequently Manfred Weiss Steel and Metal Works/Weiss Manfréd Acél- és Fémművek, and later Csepel Steel and Metal Works/Csepel Vas- és Fémművek), due to the production profile of the company, the area's peripheral situation and isolation was a decisive factor. In the market environment of rapid industrialization during the two World Wars, the company grew enormously and soon occupied a substantial part of the island (the area of the factory reached 250 hectares.) Csepel became a separate district of the city with its own identity that is still strong today. This identity has a strong connection to Csepel's industrial heritage, but less so to its island location – presumably due to its large size.[4]

On the other islands, where flood protection is provided only for the most valuable facilities, the previously described functions appear to be mixed together. The Óbuda Ship Factory (Óbudai Hajógyár founded by István Széchenyi) started operation at the Southern end of **Óbudai-sziget** (also called Hajógyári-sziget) – which originally was a two-piece bar island – in the 19th century, occupying approximately one-third of the island's area. Its other parts, which for a long time were only accessible by boat, were forested and later put to agricultural use. [2,4] Its earlier place in the urban structure was also

highly peripheral, its role less defined than Margitsziget's as an urban park.

Despite their historic significance, the islands of Budapest barely appear on the mental maps of the residents. Even the more well-known ones are just associated with one thing – Margitsziget with green areas, parks and sporting facilities, Hajógyári-sziget with the Sziget Festival. However, the others do not have a definite identity. They are not part of "common urban memory", nor do they have their own new "brand". Their desolation and isolation are also very real; the halls of industrial plants from the socialist era, the recreation areas and sports facilities of trade unions are all abandoned and covered with weeds.

It seems as if the professional side does not have an overall vision for the islands either, despite two major metropolitan concepts – a long-term developmental concept entitled *Budapest 2030 Hosszútávú Városfejlesztési Koncepció* (*Budapest 2030 Long-term City Development Concept*, 2013) [5] and a development concept of the riverfront areas called *Budapest Duna menti területeinek fejlesztése tanulmányterv* (*Concept for the development of Budapest's riverfront areas,* 2013) [6] – including islands as a recurring topic. For example, the Budapest 2030 concept states that even though the islands of the Danube have ecological, recreational, visual and cultural historical significance, they are currently not sufficiently utilized with respect to their value and importance. [5,6] The texts also include recreation opportunities for sports, paddling and – in case water quality improves – even swimming, for which the improvement of accessibility on foot or by bicycle is an essential element. Occasionally, even the type and scale of a proposed recreational function is mentioned. In the analyses, Népsziget, Óbudai-sziget and Margitsziget are grouped together, despite that their functionality, the target groups concerned and attractiveness are clearly different; and that they are suitable for very diverse local or metropolitan roles, due to their varied character, features and environmental connections.

While recreational activities and sports are functions that are easy to relate to, that these opportunities already exist and still fail to function properly on most of the islands is also something that has to be taken into account.

A concept is needed that is better thought through than the "complex restoration" specified in the proposals. However, predominantly spontaneous processes determine the fate of these islands; it is mainly local events that have an impact on how they change. The current degraded conditions clearly show that the functional restoration of these areas cannot be expected from spontaneous market processes alone.

## 3 Projects for the renewal of urban islands - some European examples in an analytic approach

Islands and peninsulas similar to those located in Budapest can be found in several big European cities built along rivers. The usage of most of them has changed drastically since the change of industry structure. There are several examples that show that islands and peninsulas formerly functioning as industrial areas, harbours or flood protection facilities increase their value and gain new functions worthy of their new status. However, in Budapest – and in Central and Eastern Europe, in general – planning and preparing for the functional change of such areas have just begun.

### 3.1 Paris– Île Seguin (cultural hub)

In Budapest, and in other European cities with river ports, the placement of industrial areas on the waterfront – and occasionally on islands and peninsulas – was formerly a highly important principle. Nowadays, as the logistical and technological reasons for this are no longer dominant, these areas – otherwise positioned in key locations – can finally leave these functions behind and facilitate the urban development processes on the waterfront, even functioning as city centres.

Centrally located islands, integrated into the city structure, can play a significant role by connecting the citizens to the water.

Île Seguin, situated within the large bend of the River Seine in the south-western part of Paris, is one of the islands to be rejuvenated in the French capital. The approximately 12 hectare island was at first home to the laundries and tanneries of the city, later becoming a popular recreational area for the residents. In the early 20th century, the Renault factory moved to the area, and the production of cars continued until the beginning of the 1990s. At that time, it was decided to shut the plant because the location and the condition of the buildings could not meet the technical standards and the tightening environmental regulations.

Jean Nouvel was chosen to plan the project to revitalize the island and its surroundings. According to the first concept, a cultural centre would have been created on the island, including a 4-hectare park, with office buildings, art, science, research and conference centres. However, residents protested against the proposed building intensity, and in particular against the planned high-rise buildings. As a result, the municipality had to change the main figures of the project. To lower the intensity of the intervention, the proposed floor area was reduced by half to increase the surface of parks and hanging gardens. (Figure 1.)

### 3. 2 Berlin – Humboldtinsel (waterfront residential area)

Waterfront areas occupied by industrial buildings and harbours are generally located far from the historical centres of major European cities, and even though their infrastructural system is usually well-developed due to their industrial past, their role in the everyday life of the city is still somewhat peripheral. This is true for Budapest as well, where several islands with good traffic connections and available services have been waiting for new functions worthy of their potential and the beauty of their environment since the fall of industry. [7]

The following, is an example from abroad where after the changes in function, the presence of natural greenery and well-developed infrastructure together made possible the creation of an attractive waterfront residential area.

The wider environment of Berlin is rich in rivers and peninsulas, with numerous islands and peninsulas. Several harbours have been established in the German capital on the bays and lake chains of the two major rivers, Havel and Spree. One of these, Tegeler Hafen was founded at the beginning of the 20th century on the north-eastern part of Berlin, where an artificial island – today's Humboldtinsel – was created, mainly for transloading cargo between trains and ships. After the division of Berlin, when ports in West Berlin lost their significance, Tegeler Hafen was also closed. After its abandonment in the 1980s, small gardens plots were created on the former shipping site.

The owners of the plots failed to keep control over the future of the island, as it was, due to its excellent traffic connections – the closest subway station is only 300 metres away – too valuable to be used for small-plot farming. The area, located in an outstandingly beautiful environment, is undergoing prestigious, low-intensity residential development, which includes floating houses, rows of houses containing homes with private piers and characteristically urban, waterfront apartment buildings on the banks of the bay. (Figure 2)

### 3.3 Bamberg - Erba-Insel (green area and student housing)

The primary function of several islands on the Danube in Budapest is as green areas: Palotai-sziget and Háros-sziget are both virtually untouched, natural areas, while Margitsziget has been a popular recreational area for a long time. The following example describes an urban green island with mixed functions that has just recently been brought into the focus of development, despite its central location. It shows that a public function created on a former industrial site can be compatible with recreation.

Bamberg lies on both banks of the River Regnitz and an island located between two arms of the river close to its confluence with the Main. The densely built-up area of the city occupies only the central section of the island, where one of the most well-preserved historic city centres in Germany is located. The upper and lower ends of the island are occupied by less intensively used industrial and green areas. Until the early 1990s, industrial units of the Erlangen-Bamberg Cotton Mill (ERBA) operated on the Northern tip of the island. After the decline of the industry, the area – located in the immediate vicinity of the historic centre with outstanding natural conditions – became one of the focus areas for urban development. The renewal of the northern part of the island is part of the ERBA revitalization programme. An urban public space has been created in its centre, which will also be the focal point of district life. New library buildings and several faculties of the renowned local university will be also built here. The former cotton mill buildings – which are considered to be extremely valuable elements of the industrial heritage – will be converted into loft apartments for university students, while the open spaces of the former industrial plant have been transformed into thematic gardens, making special effort to conserve the existing wildlife of the area. On the waterfront, in the wider surroundings of the former industrial facilities, landscape elements dominate: on the tip of the island, using the natural scenery, an open-air stage has been created by terracing the terrain. The complex system of bicycle and pedestrian routes, venturing onto the banks and even over the water itself, create a direct connection with the wetland. The realization of the ambitious concept for green areas was greatly helped by the 2012 Bavarian gardening exposition that was held on the development area. (Figure 3)

## 4 Plans for the future of Népsziget – proposals towards primary forests and/or development

Given the duality of the predominantly recreational functions appearing in the concepts for Budapest and the international examples often dominated by investment interests, one of the main goals of the student project in urban design, mentioned in the abstract, was the assessment of this dual approach.

The beginning of the semester-long project focused on analysing the situation of the islands and peninsulas at the municipal level; and later, to create an overall concept, encouraging even wholly hypothetical proposals.

Some proposals focused on the possibilities of actual spatial connection between separate islands in areas where it may be supported functionally by land use. The other approach searched for ways of theming the islands and peninsulas, brands that could create a characteristic image for each area without creating monofunctional spaces. The story of the widely used and popular Kopaszi-gát (Kopaszi Dike) was a strong inspiration for branding. The concept of thematic islands suited to the needs of different generations was one of the most interesting proposals.

The focus area for the semester-long project was Népsziget and its surroundings. The area synthesises, in an interesting way, both the main problems and most exciting possibilities of islands in Budapest. The contrast of its interesting structural characteristics, excellent public transport connections, protected shore section but unprotected bay, enormous unused industrial facilities and forested floodplain areas offers an inspiring situation for urban designers. The remnants of former water-sport facilities give the area a relatable, unique character as well, despite their poor condition.

Based on all these conditions, exciting plans have been created by the students, almost all of which set out to keep and strengthen the contrast between the openness of green areas and the density of former industrial areas. The following are a few of the typical approaches:

**Fig. 1.** Île Seguin, Paris
(ileseguin-rivedeseine.fr,
urbanlabglobalcities.blogspot.com)

**Fig. 2.** Humboldtinsel, Berlin
(bz-berlin.de, humboldt-insel.de)

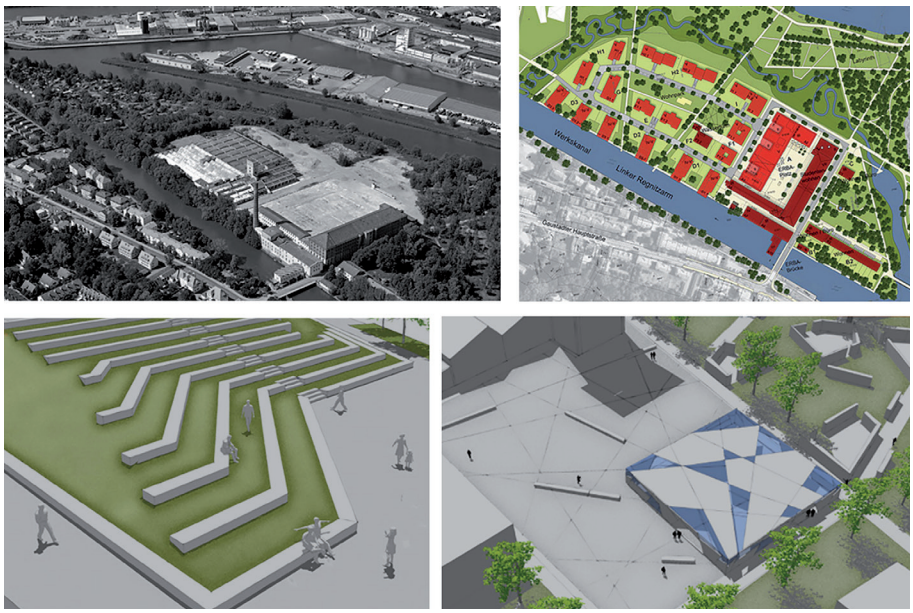

**Fig. 3.** ERBA-Insel, Bamberg
(erba-insel.de, bamberg-guide.de)

- *The island as a separate urban area*
  One of the unique properties of the peninsula is that while it is in structural connection with the city, it is also separated from it. This makes it ideal for functions that can generate conflicts in their immediate surroundings. This inspired the idea of a "*campus-island*"[1], which would not only function as an area for housing students, but also as the urban area for student life, alternative entertainment and tourism that is so popular across Europe. (Figures 4 and 5)
  The "*Movie Factory*" [2] concept was also based on the advantages of isolation. The vast halls of the former shipyard perfectly fit the spatial requirements of the technology. In addition to the closed facility, the planners also provide an entrance for visitors by creating a thematic route equipped with temporary, periodical and dynamic spaces (changing village-set) and contemporary land-art areas exposed to the movement of the river. (Figure 8) It is worth noting that an important aim of both concepts was to pay attention to the interests of the residents of Újpest and Angyalföld – both areas being close to the Danube and lacking recreational areas – and also give them access to the river, regardless of the isolation of the location.
- *The island as a planned landscape*
  Despite the attractive landscape properties of the area, its desolation and state of disrepair suggests that the functions of open spaces should be re-evaluated. In international practice, a wide and inspiring range of landscape architecture tools can be observed, and many architecture students show great interest towards these. Experiments in combining the recreational and leisure functions of planned landscapes with the demands of extreme sports (skateboarding, cycling), while trying to find overlaps and boundaries are of special interest.[3] (Figure 9.)
- *The island as a different way of living or as a designated place for a designated function*
  While several international examples prefer residential functions, the majority of BME students are reluctant to use the area for private housing. For this reason, a recurring idea in their concepts was related to particular residential areas serving individual demands – artists' residences with artist's lofts[4] (Figures 6 and 7), quarters for social rehabilitation or the elderly. These concepts calculate – at least partly – with the repurposing and renewal of valuable industrial buildings that have been abandoned or are still more or less functioning, bringing a new and exciting urban sense of space into the world of industrial buildings and shipyards.

Indicated above are the most typical responses the students gave to the questions raised by the special properties of the island. The first important task was to decide whether there is a function that can enhance the positive features of the island location and make isolation a true advantage. The assignment provided a broad range of opportunities to try experimental functions and building types. Moreover, even though various exciting and bold ideas were proposed regarding functions and uses, most students became cautious when it came to using urban design tools for the spatial and building arrangements. This kind of insecurity was most pronounced when dealing with waterfront situations, which confirms the early hypothesis that Hungarian public opinion – professional and layman alike – is still lacking a resolute idea that could answer the questions raised by waterfront situations in urban planning.

1 Plan of Bernadett Csendes and Péter Róbert Szabó
2 Plan of Mariann Mokos and Áron Lévay
3 Plan of Vanda Buriana and Tamás Samu
4 Plan of Inez Petrényi and Enikő Tóth

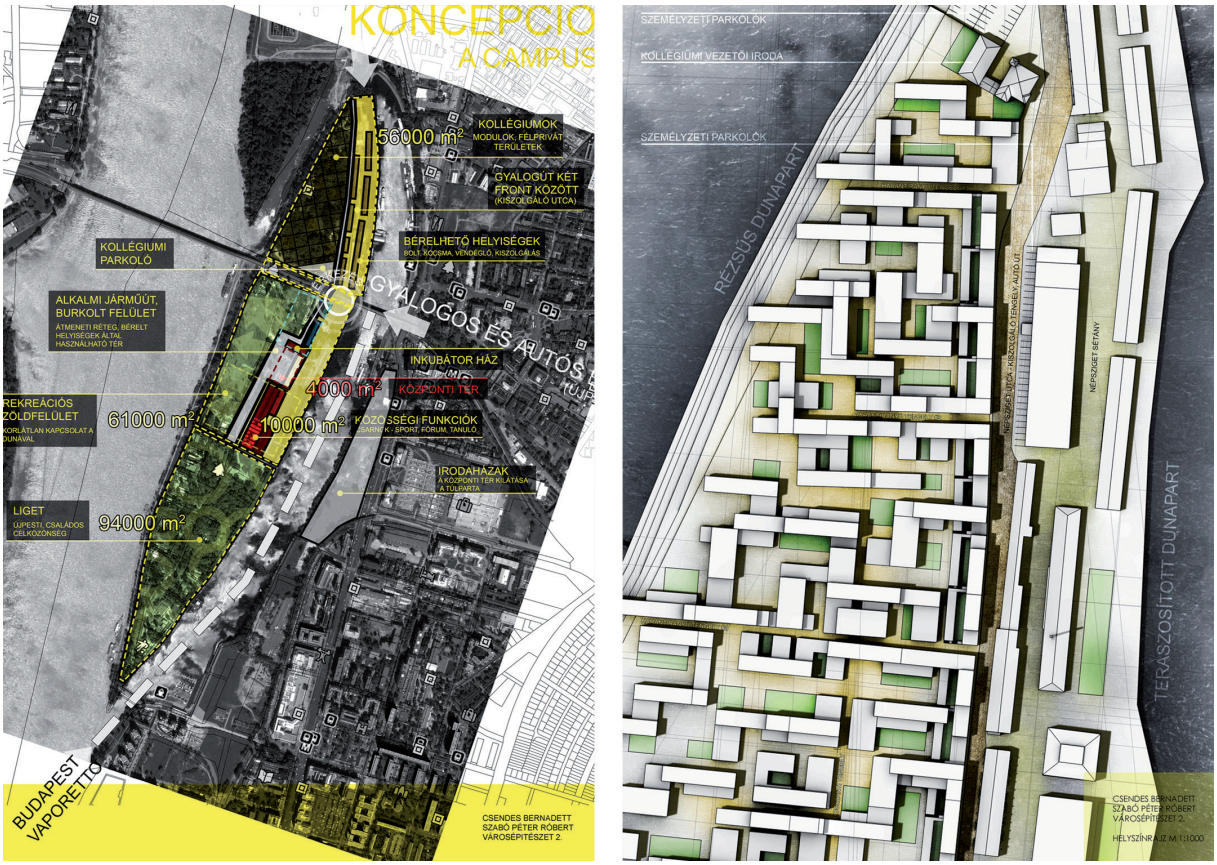


**Fig. 4. and 5.** "The Campus-Island" *(Plan of Bernadett Csendes and Péter Róbert Szabó)*

**Fig. 6. and 7.** The Island with artist's lofts *(Plan of Inez Petrényi and Enikő Tóth)*

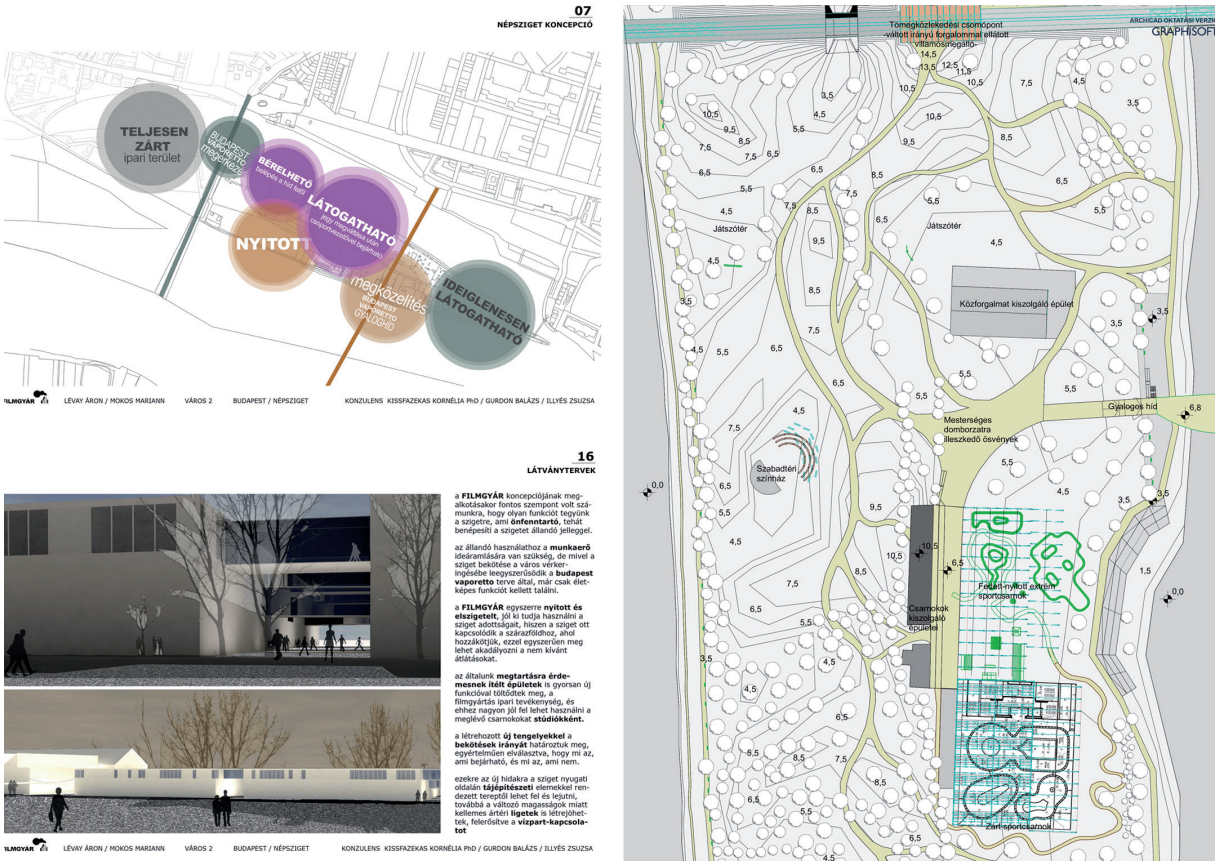


**Fig. 8. (left)** The "Movie-Factory" *(Plan of Mariann Mokos and Áron Lévay)*
**Fig. 9. (right)** The Island as a Planned Landscape *(Plan of Vanda Buriana and Tamás Samu)*

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