

Skriveni Zid Zemun

# Zemun Hidden Cliff: Revealing the Nature Monument

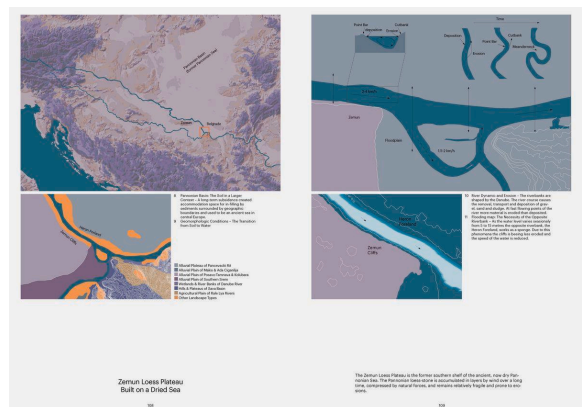
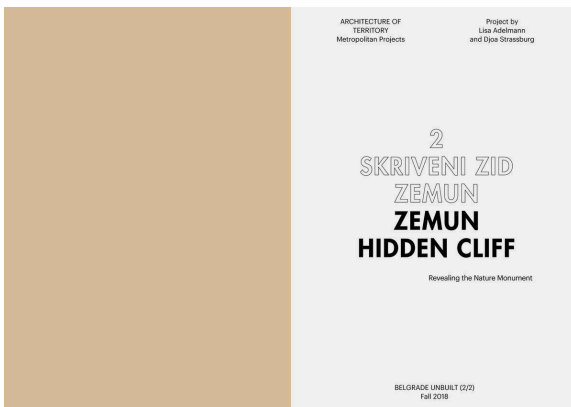
Lisa Adelman and Djoa Strassburg



West of the Gardoš Hill in the historic core of Zemun, the Danube River cuts a steep cliff through an elevated alluvial plateau. While most of the Danube's shore is made up of low-lying floodplains, here the loess of the Srem Plain forms a high barrier to the river's currents. The northern outskirts of Zemun have stretched along this embankment since the early 20th century, but few measures have been undertaken to fortify the underlying clay and sand sediments that the river's current washes away. After centuries of erosion, some of the loess coastlines have turned into cliffs with up to 90 % vertical gradient, leaving them vulnerable to mass wasting from precipitation and river currents. In the previous centuries, settlers dug vertical shafts into the ground to ventilate a vast underground network of tunnels and storage spaces, which kept the soil dry and compact. With the rapid expansion of the town of Zemun this system was neglected or used as an illegal dumping site. In the last three decades there have been a number of landslides, which endangered buildings and roads and claimed human lives.



Nevertheless, this embankment—which can reach up to 25 metres in height—has become an attractive but unstable ground for informal settlements. As the demand for housing increases, single-family homes are being replaced by multi-storey apartment buildings. These informal structures creep ever closer to the eroding cliffs in search of a river view. Down at the river's edge, informal shipyards and barrack settlements have nestled into the steep slopes, hidden away from view of the authorities. The recent construction of the Mihailo Pupin Bridge, which connects Zemun and New Belgrade with the agricultural plain and Third Belgrade, has made this area increasingly attractive for housing and industry. Simultaneously, the Belgrade General Plan partly protects this fragile coastline as a natural monument.


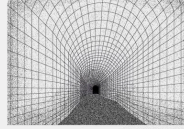
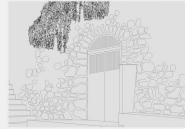





**1. Shaping of Cliff Morphology  
Flood and Erosion**

102

In contrast to the steep cliffs in Danube, the left bank of Danube, the recent landscape has the character of a plateau, for the reason of the failure of a great experiment to change the cliff by the "bridge" system which would keep the remains above the plateau and the erosion.

**Treasures of Loss Landscape  
Lagun Corridors and Unique Formations**

104

Large concrete wall was to build on, but the morphology of the ground has also been used to structure the space. Along the Danube River, the landscape is a series of corridors, the corridors are called "lagun", formed by water in the Danube River. The landscape was changed and reinforced with the grid to build on the ground.





**Claiming the Plateau  
Illegal Constructions and Eroding Grounds**

103

In order to secure the form of the plateau, the situation shown a lack of grid lines and other conditions. The situation was full of danger. The situation shown a lack of grid lines and other conditions. The situation was full of danger. The situation shown a lack of grid lines and other conditions. The situation was full of danger.


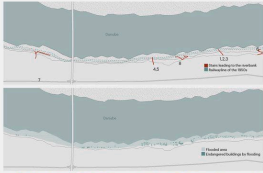





**Cliff Façade and Vertical Landscape**

105

The vertical cliff face was designed. A series of forms and building forms on the face of the cliff face, which are very specific to the site. The building forms are designed to be integrated with the landscape. The building forms are designed to be integrated with the landscape.

**Danube Water Banks  
River Life Along with the Cliff Base**

106

A few weeks ago, the bank was still accessible to boats, walking along the cliff. Today only the river remains. The bank has been built up and the river is now a narrow channel. The bank has been built up and the river is now a narrow channel.



Loess stone shaped by plant roots.

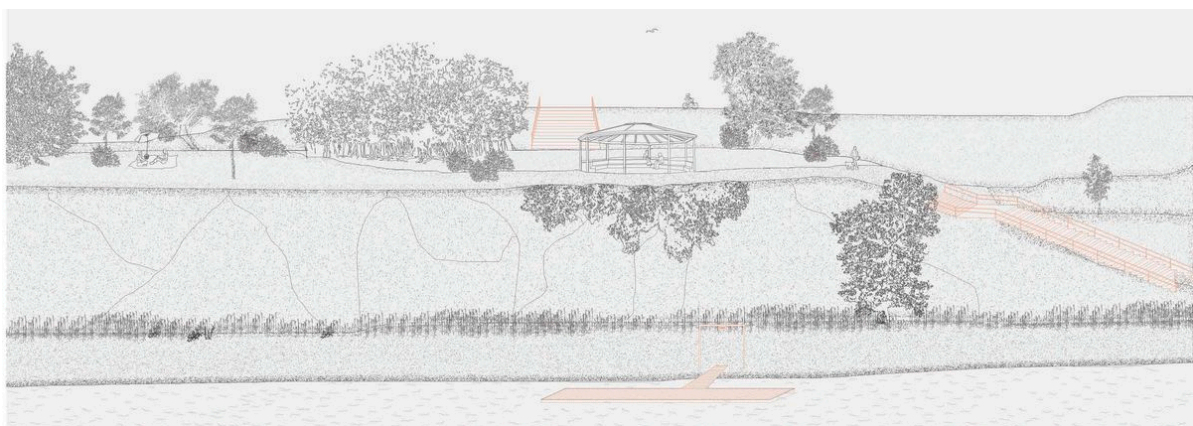
The project Zemun Hidden Cliff: Revealing the Nature Monument explores programs and conditions under which the unstable ground of Zemun could be protected. Even though the cliff area is a public good, it is not recognised as a landmark neither widely noticed as a public landscape. A set of strategic connections is proposed to reintegrate the Zemun Cliff into the panorama of Belgrade's metropolitan public landscapes, making it accessible and tangible. Additionally, the project highlights the different characteristics of a nature monument as it combines the focus and protection of the geological beauty and hidden man-made artefacts. Bringing more consciousness and visibility to the unique natural monument, intervening with light and punctual structures will reveal the site to the public, secure the fragile ecosystem of the river, and keep the shoreline intact so that it can perform as a safe recreational space for the neighbourhood.



Revealing the unique public landscape of hidden natural and man-made artefacts.



The old Brewery becomes a culture centre and curated gate to the cliff landscape.



A "Pavillion for Loess Stone" to observe the riverbank.

## SOURCES

- “Donau Inseln.” \*Donauinseln.\* Accessed December 2018. <http://donauinseln.blogspot.com>
- “Lagum u Karađorđevoj.” \*Undergrad.\* Accessed December 2018. <http://undergrad.rs/lagum>
- Paul R. Bierman, David R. Montgomery. \*Key Concepts in Geomorphology.\* New York City: W. H. Freeman, 2014: pp. 192, 205, 206.
- “Timeline of Zemun.” \*Wikimedia.\* Accessed December 2018. [https://en.wikipedia.org/wiki/Timeline\\_of\\_Zemun\\_history](https://en.wikipedia.org/wiki/Timeline_of_Zemun_history)
- “Topographic hillshade map of the Pannonian Basin.” \*Maps on the Web.\* Accessed April 2022. <https://mapsontheweb.zoom-maps.com/post/113505463092/topographic-hillshade-map-of-the-pannonian-basin>
- ““Udruženje Ekološki pokret Zemun.”” \*Leszemun.\* Accessed November 2018. <http://leszemun.rs/zemunski-lesni-profil1/index>
- “Ulaz u lagum.” \*Wikipedia.\* Accessed December 2018. [http://sr.wikipedia.org/wiki/%D0%94%D0%B0%D1%82%D0%BE%D1%82%D0%B5%D0%BA%D0%B0:Ulaz\\_u\\_lagum.JPG](http://sr.wikipedia.org/wiki/%D0%94%D0%B0%D1%82%D0%BE%D1%82%D0%B5%D0%BA%D0%B0:Ulaz_u_lagum.JPG)
- “Zemun 1791.” \*Wikimedia.\* Accessed December 2018. [https://upload.wikimedia.org/wikipedia/commons/a/a9/Zemun\\_1791.png](https://upload.wikimedia.org/wikipedia/commons/a/a9/Zemun_1791.png)
- “Zemun 1688.” \*Wikimedia.\* Accessed December 2018. [https://upload.wikimedia.org/wikipedia/commons/d/d0/Zemun\\_1688.jpg](https://upload.wikimedia.org/wikipedia/commons/d/d0/Zemun_1688.jpg)

This work by Lisa Adelman and Djoa Strassburg was created as part of the design studio Beograd Unbuilt (2/2) at ETH Zurich in Fall 2018. The PDF is intended for educational purposes only. Its commercial distribution is strictly forbidden.

© 2025, Architecture of Territory

Architecture of Territory  
Professor Milica Topalović

TEACHING TEAM

Hans Hortig  
Karoline Kostka  
Metaxia Markaki  
Ferdinand Rabe von Pappenheim  
Milica Topalović  
Adrienne Wilson

Prof. Milica Topalović  
ETH Zurich  
ONA G41  
Neunbrunnenstrasse 50  
8093 Zurich  
Switzerland  
+41 (0)44 633 86 88  
[www.topalovic.arch.ethz.ch](http://www.topalovic.arch.ethz.ch)