ARCH 346: Archmedium 2015 Ohrid Watersports Centre Essay

Ohrid Nomadic Plane (ONP)
Soo Woo

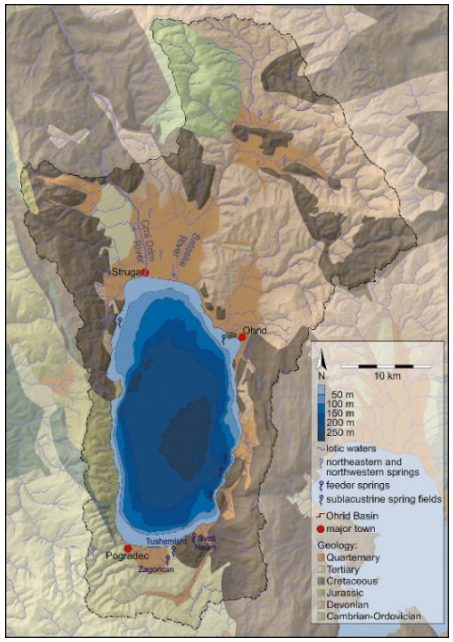
[fig.1] Proposed: Water Level View

ArchMedium is an ideas competition that requires research of a wide variety of architectural precedents from all over the world. The theme of this summer's competition was a design of a water sports club that engages the natural, historic and cultural aspect of the lake Ohrid, Macedonia. This new facility aims to create a community that serves the city by promoting various kinds of watersports and hosting the annual Ohrid Swimming Marathon.[1] In this paper, I would like to provide the research materials that led the final proposal of our Ohrid Watersports Centre. The research of our proposal, the Ohrid Nomadic Plane, consists of three categories: natural heritage, historical heritage, and the potential of watersports centers in modern society.

[1] "OWC_Brief_en_2.0" *Archmedium*, 2015.

Natural Heritage

The site is located between the lake Ohrid and the mountain Galichica in Macedonia. The site has a close relationship to the nature; therefore, understanding the geological features of the site was the starting point of the design process. Lake Ohrid is one of the major attractions in Macedonia; it is known as the deepest and oldest lake in the Balkans; it is 288 meters in depth; and the water is transparent to a depth of 22 meters (fig.2).[2] This unique aquatic feature allowed a wide collection of endemic water plants and animals. Many international research institutions pay a great attention on the ecological system of lake Ohrid. On the other side, the site is situated at the base of a mountain range, which overlook the lake at a height of 900m. The site is located in between this outstanding natural backdrops of green and water. According to our research; however, the average height of a water sports facility does not exceed 100m. This indicates that the elevation of the building, however tall it is, will not leave an impact compared to the nature surrounding the site. For example, the Beijing National Aquatic Centre is 30 meters in height and the Beijing National Stadium by Herzog de Meuron has the tallest height of 69 meters. Even the tallest skyscraper in the world, Dubai Burj Khalifa at 828 meters, cannot compete with the surroundings. This is beside the fact that such a placement of massive structure will be detriment to the scenery (fig.3). As a result, we concluded that the new design of a community centre should not compete with the nature of Ohrid, but rather complement it with a keen design strategy.



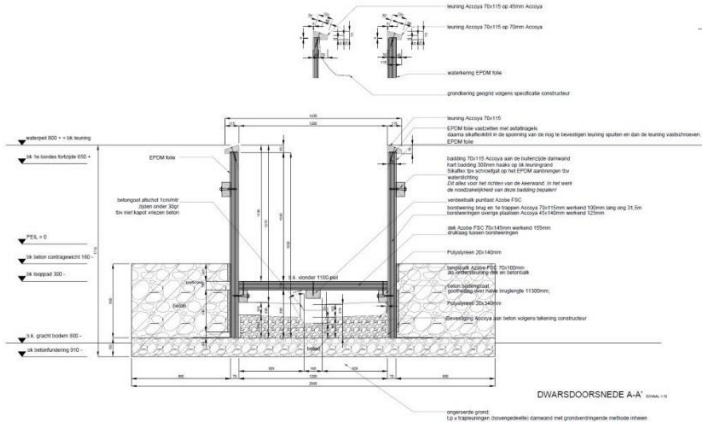
[fig. 2] Lake Ohrid

[fig. 3] the height of the site in comparison with the iconic buildings in the world

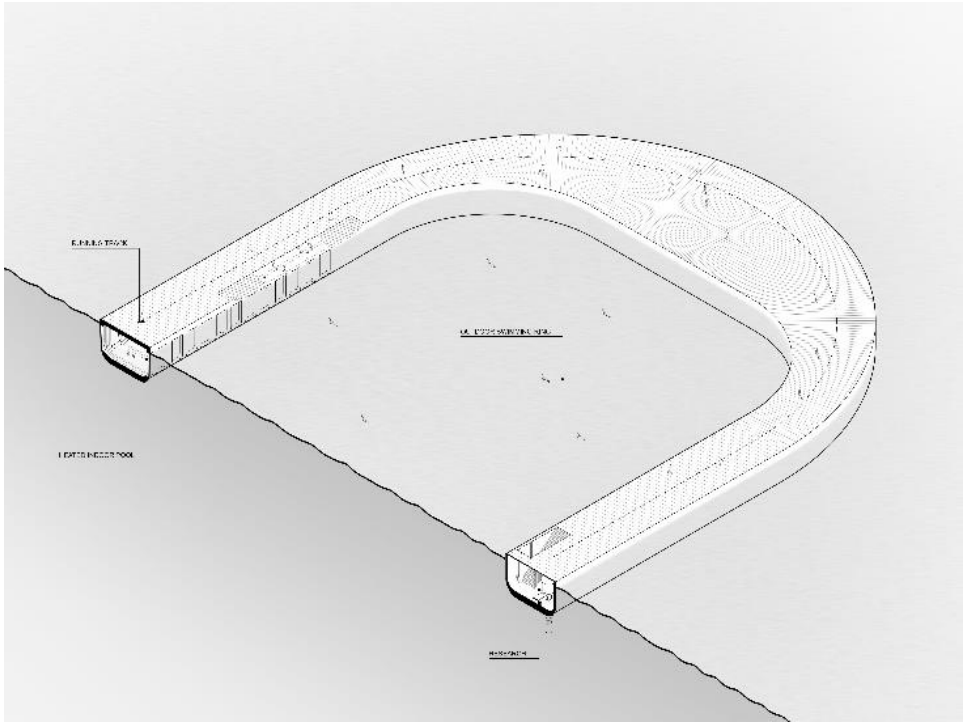
[2] Wagner, B., and T. Wilke. "Evolutionary and Geological History of the Balkan Lakes Ohrid and Prespa." Biogeosciences 8 (2011): 995–998. Accessed December 30, 2015. doi:10.5194/bg-8-995-2011.

Moses Bridge by RO&AD Architecten in Netherlands is an example of a project that complements the surrounding nature, it is based on the idea of inserting a bridge into the water to reduced visual impact on the site. (fig. 4,5)The bridge is invisible at the water level and is inversely analogous to the defensive moat of the nearby fortress Fort de Roovere.[3] By embedding the passage below water level instead of elevating it, the project does not disturb natural heritage of the site visually. We were inspired by this strategy of inserting building program under the water, so the building doesn't obstruct the scenery of the site. In our design, we placed all required programs under the water, so that only top deck building is exposed on the water level. (fig. 6) On the surface, the building appears to be nothing more than a platform. This platform connects the building to the lakeshore and creates a continuous path from the existing promenade. We used the same wood as the fishing docks of Macedonia on the deck, so that design looks consistent with the region.

[fig. 4] Moses Bridge Exterior View



[fig. 5] Detail of Moses Bridge



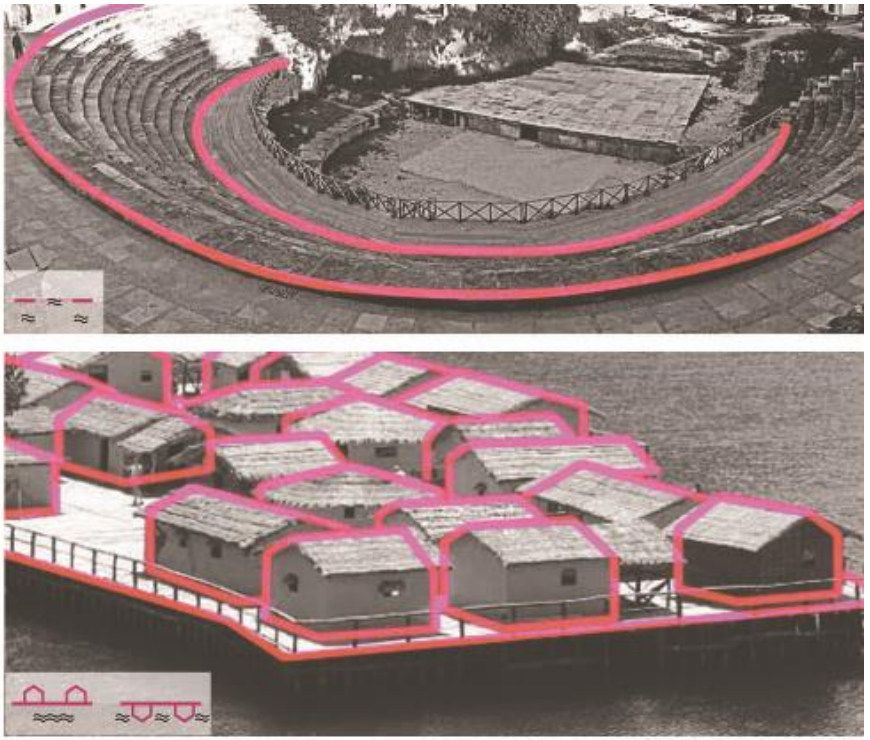
[fig. 6] Proposed: Axonometric Section

[3] "Moses Bridge / RO&AD Architecten" 17 Nov 2011. ArchDaily. Accessed 30 Dec 2015. <http://www.archdaily.com/184921/moses-bridge-road-architecten/>

Historical Heritage

Looking at photos of Ohrid's rich architectural history, we found three structures that influenced the conception of our design. The first and foremost is the indigenous housing of Ohrid that existed even before the Greeks and Romans. (fig. 9)[4] The indigenous housing was built on decks out on the water. This was proof to us that there was a water influenced culture in Ohrid since ancient times. So we took this typology and flipped it upside-down so that the buildings were below the deck, this way there is a greater harmonization with the flat surface of the water. The second building was the ancient Greek amphitheaters. (fig. 8) We found these forms interesting because they suggested an interior view. We took the form and mirrored it to form a loop, making it a form that inscribes an area for activity and a perimeter viewing platform. When the form becomes a loop; however, it also becomes a 360 degree observation deck for nature and the water sports activities that are happening outside the ring. The last structure we were interested in was a dock that exists near Biljana Springs. (fig. 7) The dock is heavily photographed because it reaches into the lake. We felt that the dock could never quite reach far enough, so the best strategy was to sever the dock from the land so that it can move freely in the lake. This way we can immerse people directly in the beauty of the lake.

[fig.7] Existing Dock

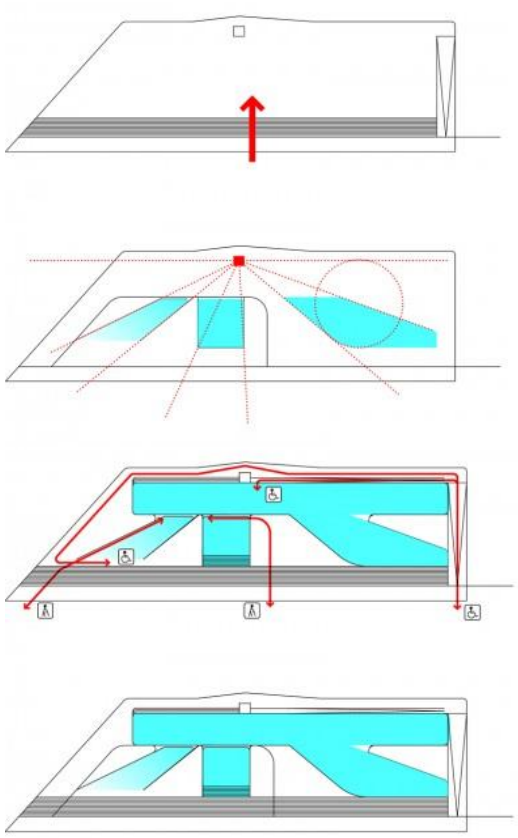


above: [fig. 8] Existing Amphitheater/ below: [fig. 9] Indigenous Housing in Ohrid

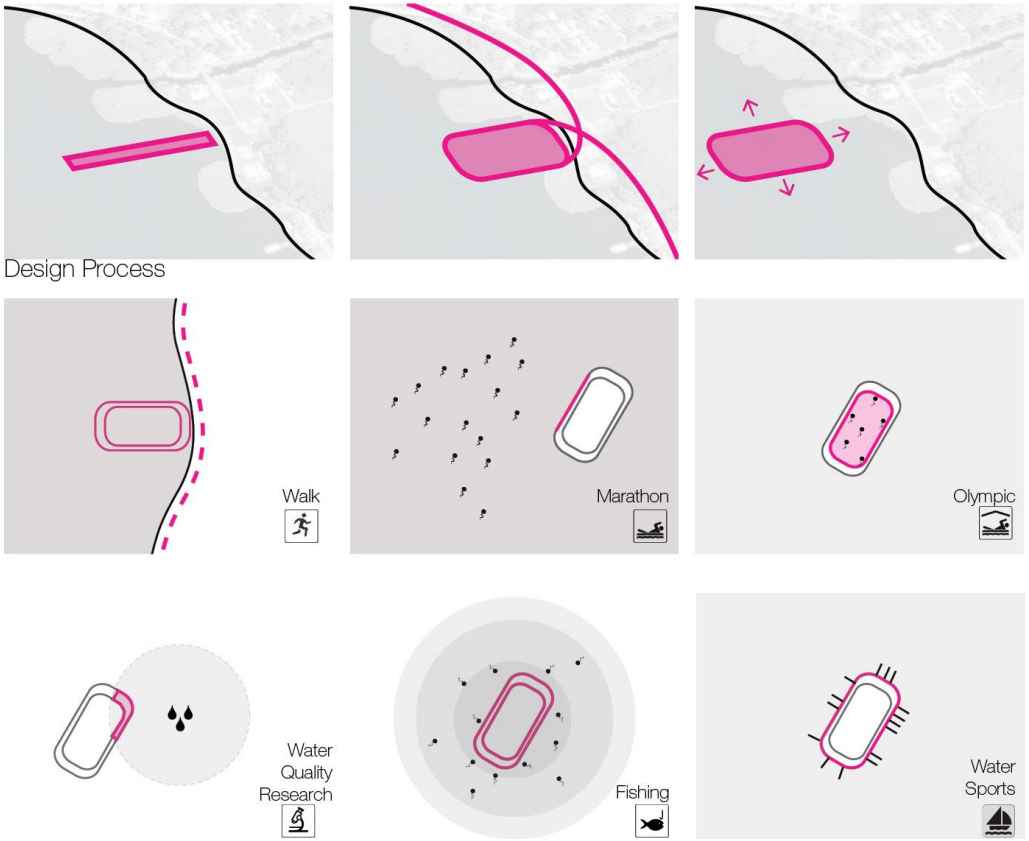
[4] "Cultural Heritage Protection Office." Cultural Heritage Protection Office. Accessed December 30, 2015. http://uzkn.gov.mk/default_en.html.

The Potential of Watersports Centres in Modern Society

We wanted to look into typological research of dock design. The Copenhagen Harbor Bath designed by Bjarke Ingels Group illustrates a good reimagining of the use of a dock. (fig. 10) The dock extends the landscape of the nearby park and reshapes the waterfront by providing a horizontal transition between the land and water. Having a more direct contact to the water, this floating dock contains small pools where different activities are taking place such as: swimming, bathing, diving etc.[5] We took BIG's idea of land that morphs into a dock that elongates the lake shoreline and creates an extended promenade to the water. Moreover, we tried to incorporate the idea of a circumscribed pool within the dock that differentiates experiences happening inside and outside of the dock. (fig. 11)



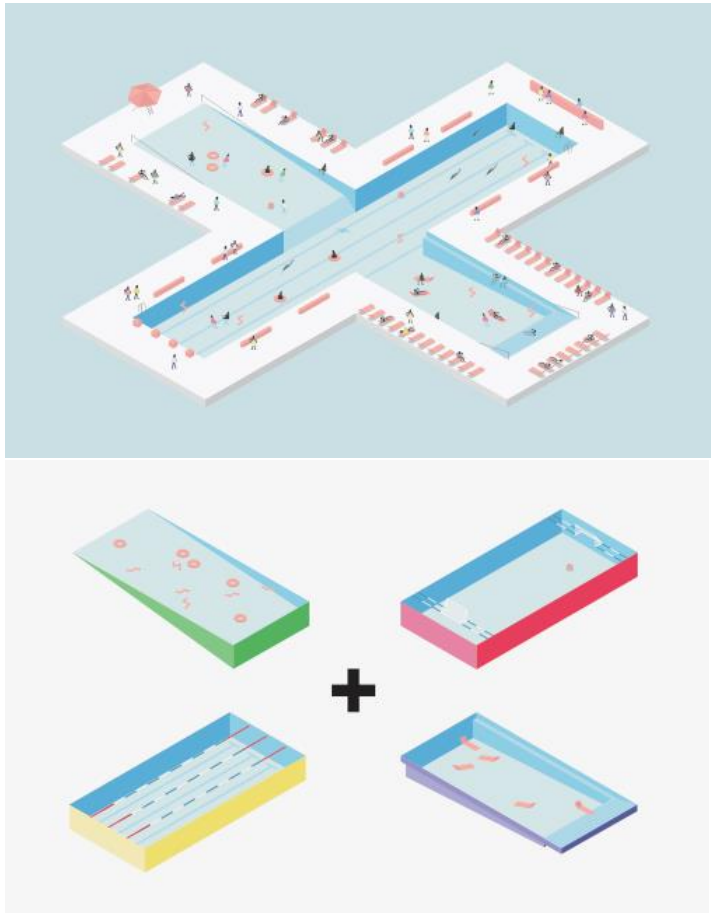
[fig. 10] Diagram of Harbor Bath



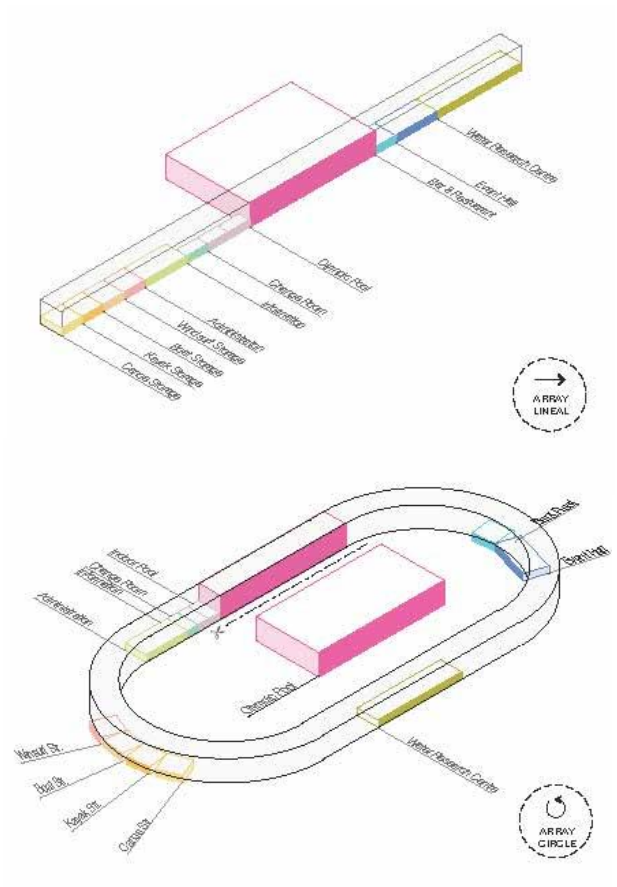
[fig. 11] Proposed: Diagram of Design Process and Different Scenarios

[5] "PROJECT." BIG. Accessed December 30, 2015. http://big.dk/#projects-bad.

+Pool in New York City is another dock precedent that we looked into. The concept of the pool is to create a swimming pool that floats on the water and carries 4 different occupations: Kid's pool, Sports pool, Lap pool and Lounge pool. (fig. 12) [6]Their design inspired us in two aspects: firstly, the primary function of the pool is placed in the centre of the building, with the circulation at the parameter. Secondly, unlike BIG's Harbor Bath, +Pool is a separate assembly entirely detached from the land and harbor port. (fig. 13) We beheld the opportunity that the building can be independent from the land and depart from the harbor port when it is necessary; such as when the annual marathon is occurring.



[fig. 12] Axonometric Diagram of +Pool

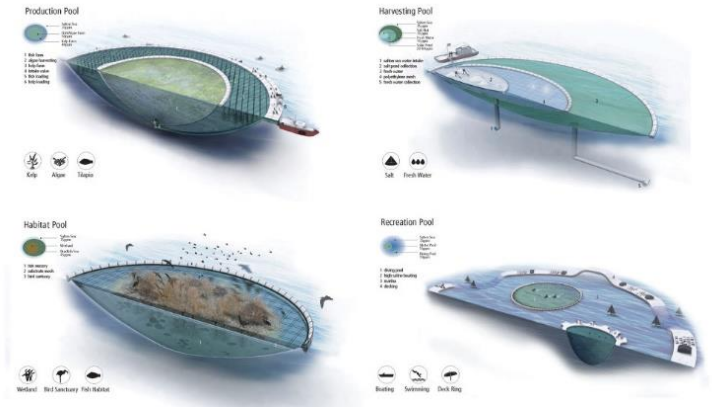


[fig. 13] Proposed: Axonometric Program Diagram

[6] "Buy a 2015 Tile, Build a Pool." Buy a 2015 Tile, Build a Pool. Accessed December 30, 2015. http://www.pluspool.org/.

Lateral Office's proposal for aquatic infrastructure in Southern California, Water Economies, inspired us to look at the impact of our design on the regional scale. (fig. 14) Considering the changing level of tides in the Salton Sea, Lateral Office proposed multiple water pads that function as "salinity regulation devices as well as harvest plots, habitats, and recreational destinations."[7] (fig. 15) Adopting this idea of buoyant water infrastructure, we began to look at the opportunity of a mobile architecture that operates across Lake Ohrid. We thought that our design could serve as an aquatic research facility and collects data of the ecological condition of water where the access is limited. (fig. 16) Also, this mobile community centre has the potential to improve regional economy by transporting people and promoting a cultural exchange between Macedonia and Albania. (fig. 17)

[fig. 14] Aerial View of Water Economies



[fig. 15] Axonometric Diagram of Different Water Pods

[7] "WATER ECONOMIES 2009-10 - LATERAL OFFICE." LATERAL OFFICE. Accessed December 30, 2015. http://lateraloffice.com/WATER-ECONOMIES-2009-10.

[fig. 16] Proposed: Plan Below the Water

[fig. 17] Proposed: Aerial View

Conclusion

Each topic of research we looked at gave us ideas that played into the final design of Ohrid Nomadic Plane. The study of the site's natural heritage outlines a clear direction of the competition. The way in which a construction can enhance one's connection with nature is exemplified by the Moses Bridge by RO&AD Architecten. The overview of historic sites in Ohrid helped to develop the design further in terms of adopting historical and cultural aspects of the site. Finally, the Copenhagen Harbor Bath by BIG, +Pool in NYC and Water Economies by Lateral Office were all projects which challenged the idea of what a modern water sports centre could be and helped us to develop the unique characteristics of our proposal. Undoubtedly, research into the site's characteristics and relevant precedents helped us to conceive and develop our concept; however, I think that exploring many iterations and discourse were the major processes which brought the project together. I think that research into precedents is an important step between a project's brief and the first few options of any design.

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"WATER ECONOMIES 2009-10 - LATERAL OFFICE." LATERAL OFFICE. Accessed December 30, 2015. http://lateraloffice.com/WATER-ECONOMIES-2009-10.

Images:

[fig. 2]

T. Hauffe, C. Albrecht, K. Schreiber, K. Birkhofer, S. Trajanovski & T. Wilke - Hauffe T., Albrecht C., Schreiber K., Birkhofer K., Trajanovski S. & Wilke T. (2011). "Spatially explicit analysis of gastropod biodiversity in ancient Lake Ohrid". Biogeosciences 8: 175–188. Figure 1. www.biogeosciences.net/8/175/2011/ doi:10.5194/bg-8-175-2011. Map adapted from: Hoffmann N., Reicherter K., Fernández-Steeger T. & Grützner C. (2010). "Evolution of ancient Lake Ohrid: a tectonic perspective". Biogeosciences 7: 3377–3386. doi:10.5194/bg-7-3377-2010.

[fig. 4]

"Moses Bridge / RO&AD Architecten" 17 Nov 2011. ArchDaily. Accessed 30 Dec 2015. http://www.archdaily.com/184921/moses-bridge-road-architecten/

[fig. 5]

Valent, Vladimír. "Mojžišov Most (Moses Bridge)." Archiportal.sk. November 8, 2012. Accessed December 30, 2015. http://www.archiportal.sk/2012/11/08/mojziov-most-moses-bridge-netradicn-most-z-juhozpadnho-holandska/.

[fig. 7]

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[fig. 8]

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[fig. 9]

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[fig. 10]

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[fig. 12]

"Buy a 2015 Tile, Build a Pool." +Pool. Accessed December 30, 2015. http://www.pluspool.org/.

[fig. 14], [fig. 15]

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* All other images are produced by Soo Woo and Richard Mui.