

**OBLIQUE DESIGN:
ARCHITECTURE,
LANDFORM AND CYCLING**

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WHAT YOU ARE, TAKES YOU FAR

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Oblique design: Architecture, landform and cycling

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Abstract

The integration of cycling infrastructure into oblique forms in architecture has the potential to create a more sustainable and healthier environment by encouraging active transportation, reducing carbon emissions, and creating more friendly conditions for kids, the elderly, and people facing movement difficulties in general. However, little research has been conducted in this regard. Integrating oblique surfaces in architecture continues to be a code-related issue that buildings rarely consider in their design process, resulting in significant segregation. *Oblique Design: Architecture, landform and cycling* focuses on a design approach that prioritizes diagonal or non-perpendicular elements and can be utilized to create architecture that responds to the topography and the current need to prioritize cycling as a sustainable mobility solution. Additionally, the research examines how oblique design can contribute to creating sustainable and socially inclusive cycling infrastructure. To build an original contribution in this area of knowledge, the research analyses examples of oblique design, not the small scale of stops design and surface composition, nor the territorial scale, but the intermediate scale where the bicycle meets the architecture. To address these objectives, the research reviews a series of key precedents such as Juan Caramuel, Claude Parent, and others for later focus on constructing the Atlas of Oblique Architecture with one hundred categorized examples. The Atlas on Oblique Architecture is a comprehensive collection of information, diagrams, and case studies related to the principles and applications of Oblique Architecture. This Atlas relates and compares the architectural distribution of the selected buildings with several kinds of territorial paths. At the same time, it explores the potential of oblique angles and tilted surfaces in creating innovative and sustainable buildings and distribution systems that respond to the natural environment and enhance the human experience. Through this atlas, architects, designers, and students can better understand

the potential of Oblique Architecture in pushing the boundaries of traditional design. By presenting a range of distribution systems based on oblique design, the thesis offers insights into the potential of this design approach to shape more responsive, dynamic, and engaging urban environments for cycling. At the same time, by investigating the principles and applications of Oblique Architecture, this research contributes to developing new design strategies and techniques that can be applied in various contexts. Ultimately, this study contributes to the discourse on sustainable architecture by demonstrating the role of oblique design in shaping the relationship between architecture, landforms, and cycling.

Keywords

Sustainable mobility, Bicycle, Infrastructure, City, Theory, Oblique Architecture, Plane inclined, Cyclist Architecture, Redrawing

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