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Amman's Land Typology: The Importance of Site Characteristics on the Delivery of Sustainable Buildings

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Abstract: Amman's land typology is characterized by hilly slopes, and this presents challenges and opportunities for architects and designers aiming at delivering sustainable buildings. The research focuses on the importance of any site's given criteria, mainly its slope and topography on the delivery of sustainable buildings. Amman city consists broadly of two main types of buildings, apartment buildings and villas, by studying each type of building with regard to its environmental context on a given site in the city, the research seeks to identify the sustainable variables that site topography delimit or facilitate, using a set of attributes for each building type. The main objective of this research is to highlight the sustainable approach for building on sloped sites throughout the building project life-cycle in general, and to set a sustainability framework for designers during the initial design phase in particular. A number of case studies for both types of buildings are studied and analysed, and conclusions are given based on syntheses of available data from literature review or case analysis. At the end, the research provides a mechanism for the development of guidelines for sustainable and passive viability on preferred buildings orientation in hilly areas with regard to local climatic data.

Key words: Sustainable building, topography, slopped sites, sustainable design guidelines.