



Enhancing of Heritage Awareness and
Sustainability of Built Environment in
Architectural and Urban Design Higher Education

STATEMENTS



for Teaching through Design
for Sustainability of the Built
Environment and Heritage
Awareness



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INTELLECTUAL OUTPUT 3

2021

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TITLE

Statements for Teaching through
Design for Sustainability of the Built
Environment and Heritage Awareness

PUBLISHER

University of Belgrade, Faculty of
Architecture

DESIGN LAYOUT

Aleksandra Milovanović, Aleksandra
Đorđević, Ana Zorić, Mladen Pešić

First edition, 2021

ISBN 978-86-7924-281-5



Co-funded by the
Erasmus+ Programme
of the European Union

Statements for Teaching through Design for Sustainability of the Built Environment and Heritage Awareness

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This result has been produced as a part of O1 INTELLECTUAL OUTPUT within HERSUS project within Erasmus + Strategic Partnerships for higher education. The creation of these resources has been co-funded under grant no. 2020-1-RS01-KA203-065407 (funding period 2020-2023; total grant 246.922,00 €). This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



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CREHAR
UNESCO Chair

USE

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Daniel Pinzón-Ayala

14/14

heritage types
statements

MILITARY HERITAGE



војно наслеђе • *Beni culturali rilevanti per la storia militare* • Ιστορικές
Στρατιωτικές Εγκαταστάσεις (Στρατιωτική κληρονομιά) • *Patrimonio Militar*

GENERAL DEFINITION/ EXPLANATION



Military heritage comprise of any structure built with either natural (i.e., botanical, or geological) or syn-thetic materials, by a community to protect themselves from assailants or, in some countries today, for the maintenance of public safety, Such structures include, works of military engineering, fortifications, arsenals, harbors and naval Shipyards barracks, military bases, barracks with military houses, bunkers, testing fields, and other enclaves and constructions built or used for military, offensive and defensive purposes. Military cultural landscapes include but are not limited to territorial or coastal defense installa-tions and earth Works, which have made it possible to conserve natural spaces that, in several cases, have been transformed into natural parks and protected areas. Their presence in historically warlike terri-tories such as the Mediterranean has given them a series of values similar to those of other buildings and heritage sites, but they also possess specific values that must be carefully studied, analysed and conserved, as they form part of our past and recent history and have conditioned the evolution of our cities and territories.

RELEVANT LITERATURE
/ SOURCES FOR FURTHER
RESEARCH



[1] ICOFORT. ICOMOS Guidelines on Fortifications and Military Heritage (2021). France: ICOMOS.

[2] ICOFORT. Final Draft ICOFORT Charter on Fortifications and Military Heritage; Guidelines for Protection, Conservation and Interpretation (2020). France: ICOMOS.

[3] International Society for Mediterranean Fortifications, FORTMED (2015-2020). *Defensive Architecture of the Mediterranean*, 12 vols.

[4] Instituto del Patrimonio Histórico Español (2010). *Plan Nacional de Arquitectura Defensiva*. Spain: Ministry of Education, Culture and Sport.

[5] Klupsz, L. (2008). The spirit of the military heritage places. In *Proceedings of the 16th ICOMOS General Assembly and International Symposium: 'Finding the Spirit of Place—between the Tangible and the Intangible'*, Quebec, QC, Canada, 29 September–4 October 2008; 1–11.

[6] Instituto del Patrimonio Histórico Español (2006). "*Baños de la Encina*" charter for the conservation of the defensive architecture in Spain. Spain: Ministry of Culture.

[7] Kaufmann, J.E. & Donnell, C. (2004). *Modern European military fortifications. 1870-1950: A Selective An-notated Bibliography*. Westport: Praeger.

[8] Floyd, D.E. (1992). *Military Fortifications: A Selective Bibliography*. Westport: Greenwood Press.

