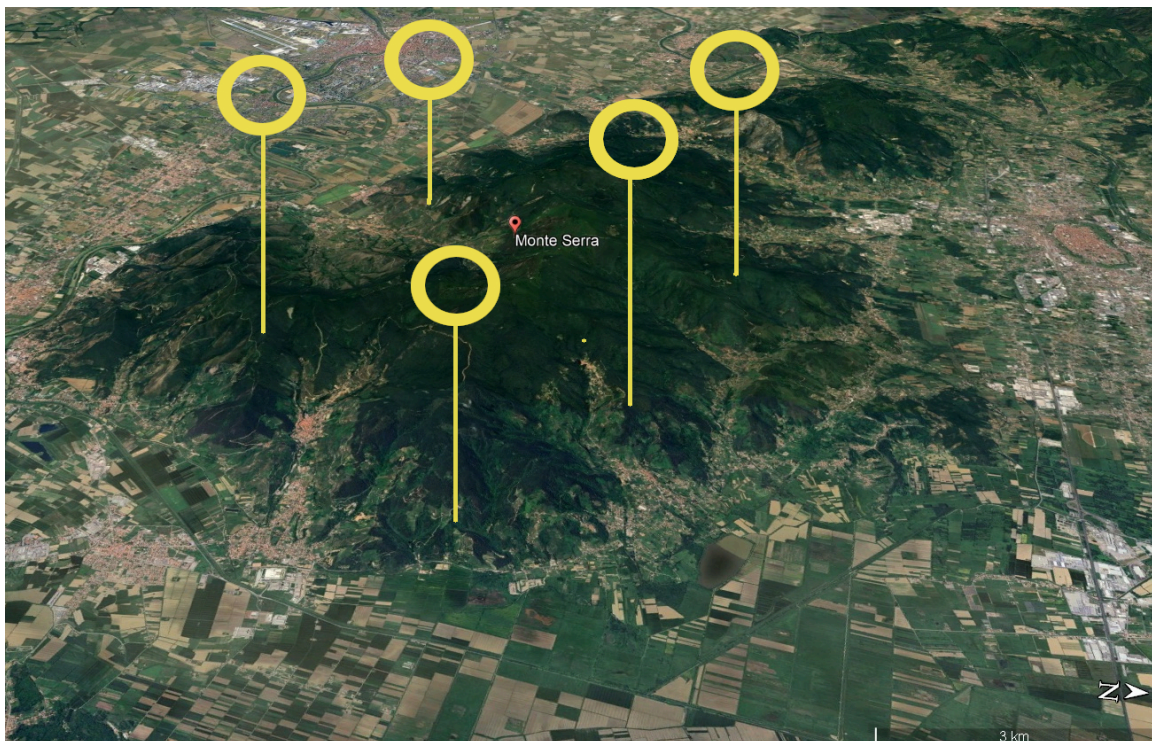




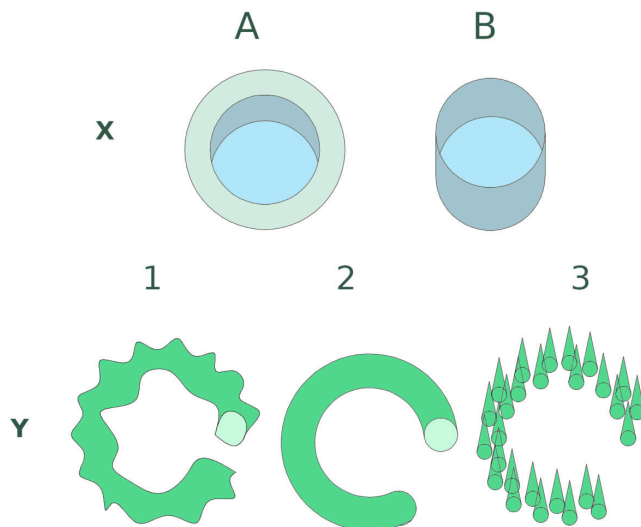
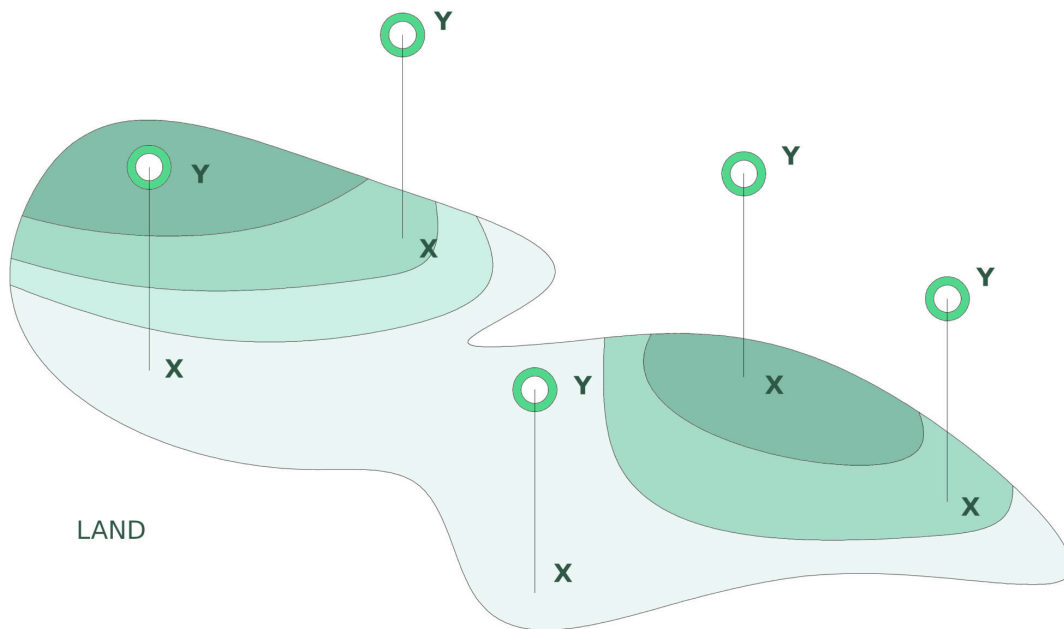
# 130Circle – 130 fireproof strawberry trees

by [Enrico Nieri Research](#) and [Anna Paola Fagioli](#) / tag [environment](#), [environmental mitigation](#), [fire prevention](#), [forest protection](#)

The vast area of Monte Pisano, due to its naturalistic characteristics, is included among the protected natural areas. The Tuscany Region has started a process of valorisation and protection of the heritage of this area and has established a complex subsystem of protected natural areas which include nature reserves, regional parks, provincial parks and ANPIL areas.



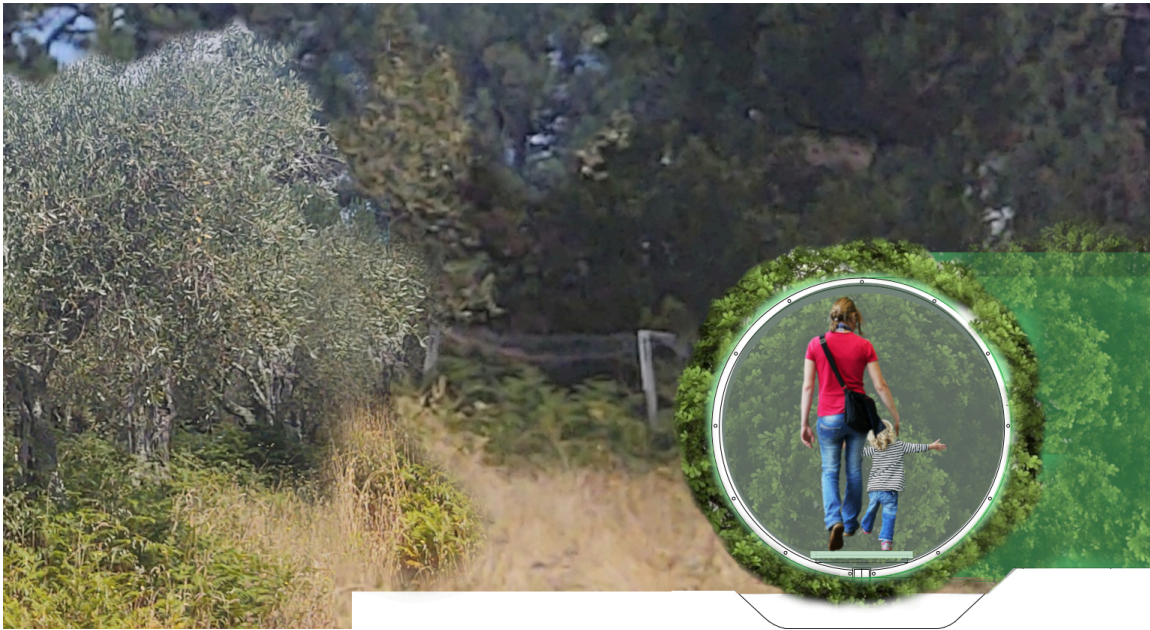
These territories represent an environmental natural treasure also from the point of view of biodiversity, and often intersect with habitats and species of flora and fauna of particular value and interest recognized by the European Union as Natura 2000 network sites.



Type of reservoir system: (X) type of reservoir - (A) dug into the earth / (B) supported and/or basement; (Y) type of corolla - (1) mixed / (2) torus with internal path / (3) punctual

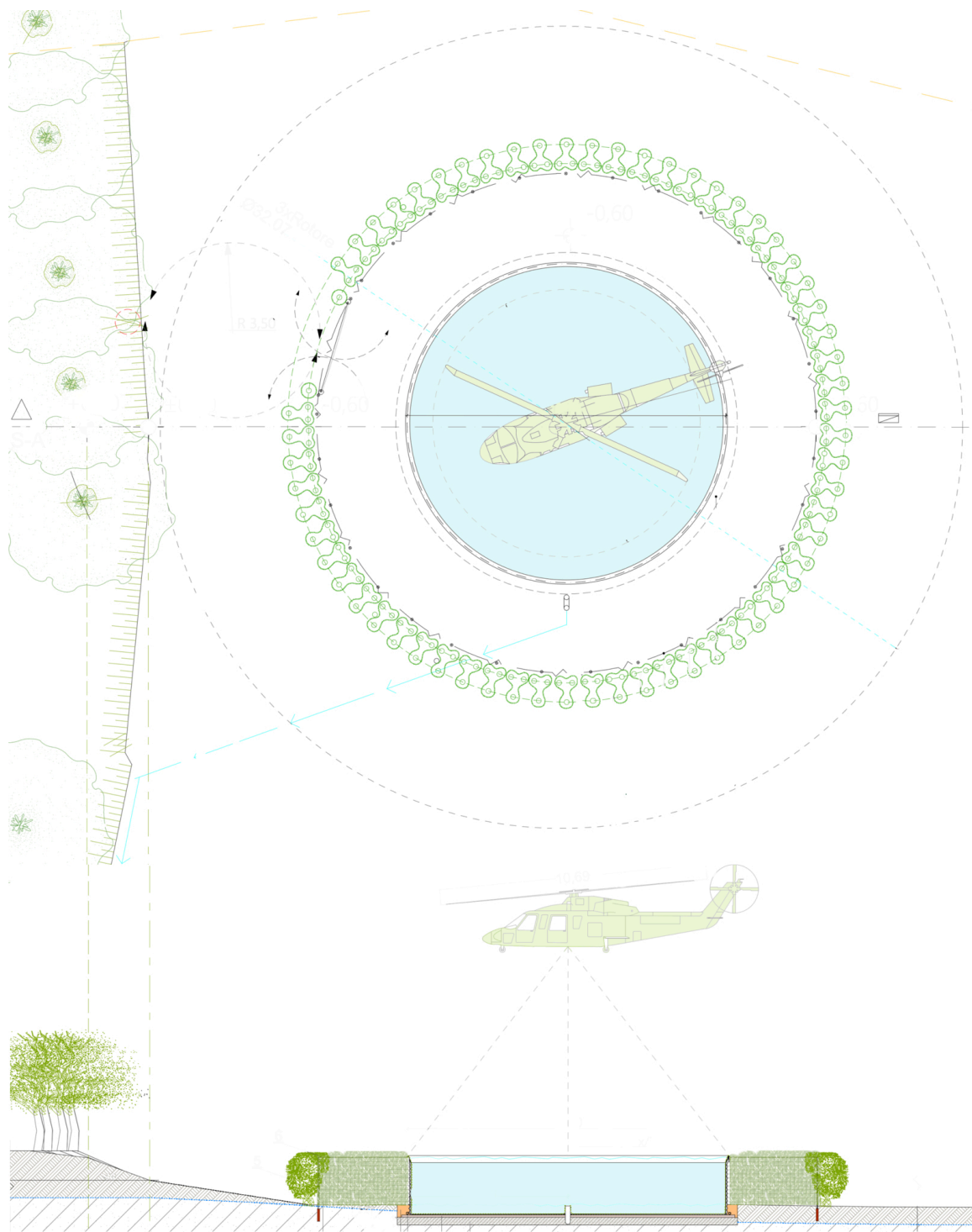
The high naturalistic value of this territory together with the particular fragility and vulnerability given by the high fire risk have created the conditions for inserting Water Points for the protection of the forest, conceived as real environmental elements. The historical presence of fortresses and military lookout points, such as the one known as Rocca della Verruca, a rock spur linked to the figures of Antonio da Sangallo and Leonardo da Vinci, suggests the idea of transforming these small water basins into new nature protection garrisons and new focal points of nature trails and paths. New water fortresses and recognizable environmental markers for land protection.





Concept solution: Type X/A - Y/2

The concept of these small structures is highly recognizable in its apparent morphological and structural simplicity. The elements that characterize them are essentially two: the first element is the circular shaped tank, which can be partially or entirely dug into the ground or simply placed on it; the second element is the "corolla" for environmental mitigation, which, depending on the position, can take on different shapes, thus morphologically characterizing the territorial marker.



Pond solution: Type X/A - Y/3

The “corolla” can have a toroidal shape and be entirely passable inside, or it can have a non-homogeneous ribbon shape or be composed of individual elements. The shape of the “corolla” thus characterizes the portion of territory on which it stands and can, in some cases, act as an environmental attractor for some species or as an environmental element for educational purposes.



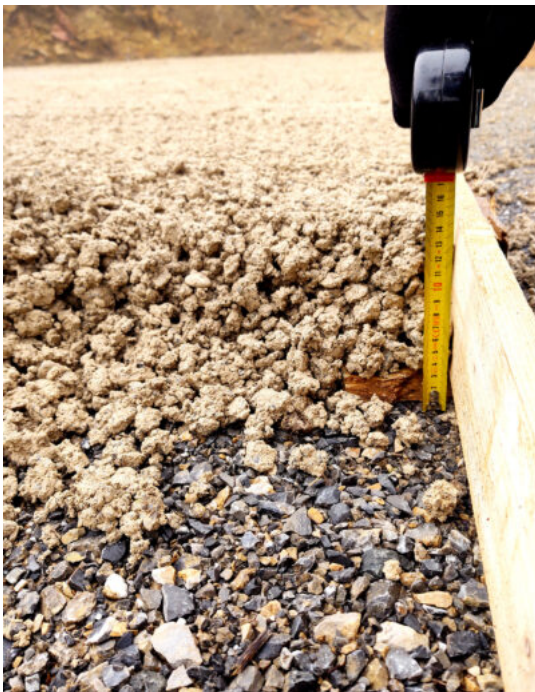


Pre-intervention view



View of the reservoir with integrated environmental mitigation corolla

In the case of the project carried out within the “Località Molino del Rotone” area (Buti), the reservoir is partially underground, so as to have less impact from an environmental point of view and is morphologically characterized by a green system with strawberry trees, with a triangular layout to accentuate the “ridge” shape along its entire circular perimeter. The chosen essence, the strawberry tree, is a native plant with good fire resistance characteristics and producer of berries typical of the area. In the specific site, 130 strawberry trees were planted; the objective is the maximum use of natural elements and technologies aimed at achieving the highest level of environmental mitigation and integration.







The body of water and the corolla of strawberry trees will contribute to the protection of habitat by attracting the avian species typical of the area. An important and characterizing aspect of the system of these water fortresses is the eco-sustainability of the intervention in the design and construction phases; all the materials used are natural, non-polluting and eco-friendly. To reduce the environmental impact as much as possible, an “eco-screed” was used, composed of material with very high compressive strength with quality and certifications that make it ideal for natural protected areas, thus avoiding invasive materials such as reinforced screeds and polluting additives. The materials used are all removable and recyclable. The reservoir was designed for supply both from the ground and from the air using firefighting helicopters.



### Project details

**Design:** Enrico Nieri Research, Anna Paola Fagioli

**Project Location:** Monte Serra, Buti, Italy

**Typology:** Fire prevention, environmental mitigation

**Design year:** 2022-2023

**Built:** 2023-2024

**Geologist:** Chiara Murgia

**Promoters:** Tuscany Region, Municipality of Buti, Forest firefighting – AIB in the Pisa area and in the forestation of the Tuscany region

**Manufacturer of equipment:** TUA srl, Terra Umini Ambiente, Consorzio Monti Pisani

**Products:** Benza srl, Terrasolida srl

## ENRICO NIERI RESEARCH

### Enrico Nieri Research

Based mainly on a platform of interdisciplinary and international collaborations, he deals with research in architecture, nature and new technologies. He stands out in various national and international competitions, among the competition-projects we can mention the project for the Radio Base Station for the Venice Lagoon exhibited in the events section, Città d'Acqua, with a collective video for architecture organization, Venice Biennale of architecture (2004) and the Open living in container competition, Tokyo 2004. His noteworthy works have been published and exhibited in Italy and abroad. Participates in the international exhibition of Young Italian Architects and in various national and international contemporary architecture events.



### Anna Paola Fagioli

In Pisa, she deepened her knowledge in the field of building restoration and renovation, and after several years of professional experience in architectural firms, she started her own career in 2005. She carries out fractionation and building renovation work for individuals and companies both as a designer and as a construction manager. She has excellent experience in the field of planning and design and a great passion for the "craft" that accompanies her in a continuous process of study and professional updating both in the field of energy efficiency and in the use of innovative techniques and materials in design and architecture. Since 2014 she has undertaken new research projects in the field of landscape, environmental sustainability, and design specializing more and more in the research of eco-sustainable and innovative materials.

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