urbanNext Lexicon

DESIGNING THE FOREST OF THE FUTURE

Posted on March 3, 2025 by Dima Fadel

Categories: Energy and sustainability, Middle Density, Project, Ruderal

Tags: Biodiversity, climate change resilience, Ecological design, ecological restoration, environmental design, European Union Prize for Contemporary Architecture, Georgia, green spaces, Landscape Architecture, Mies van der Rohe Awards, native plant nurseries, nature conservation, Public Space, sustainable cities, sustainable design, Tbilisi Urban Forest, urban afforestation, urban forestry, urban habitat, Urban planning

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In 2020, city leaders in Tbilisi, Georgia, initiated a project to replant the Tbilisi Urban Forest with a biodiverse palette of endemic and climate-adapted species, replacing the aging pine forests. Ruderal, a Tbilisi-based landscape architecture firm, was selected to design the project by proposing an innovative approach to urban forestry that integrates ecology, technology, and aesthetics.

The project is located within the 700-hectare Mtatsminda territory, which includes two pilot areas: Narikala Ridge, a north-facing cliffside that connects the historic city center to the National Botanical Garden of Georgia, and Okrokana, a south-facing slope in a peri-urban settlement in the hills above Tbilisi. The Tbilisi Urban Forest project is a model for sustainable and resilient urban afforestation that can be replicated in cities around the world. The project integrates ecology, technology, and aesthetics to create a biodiverse and resilient urban forest that will benefit both people and wildlife for generations to come.

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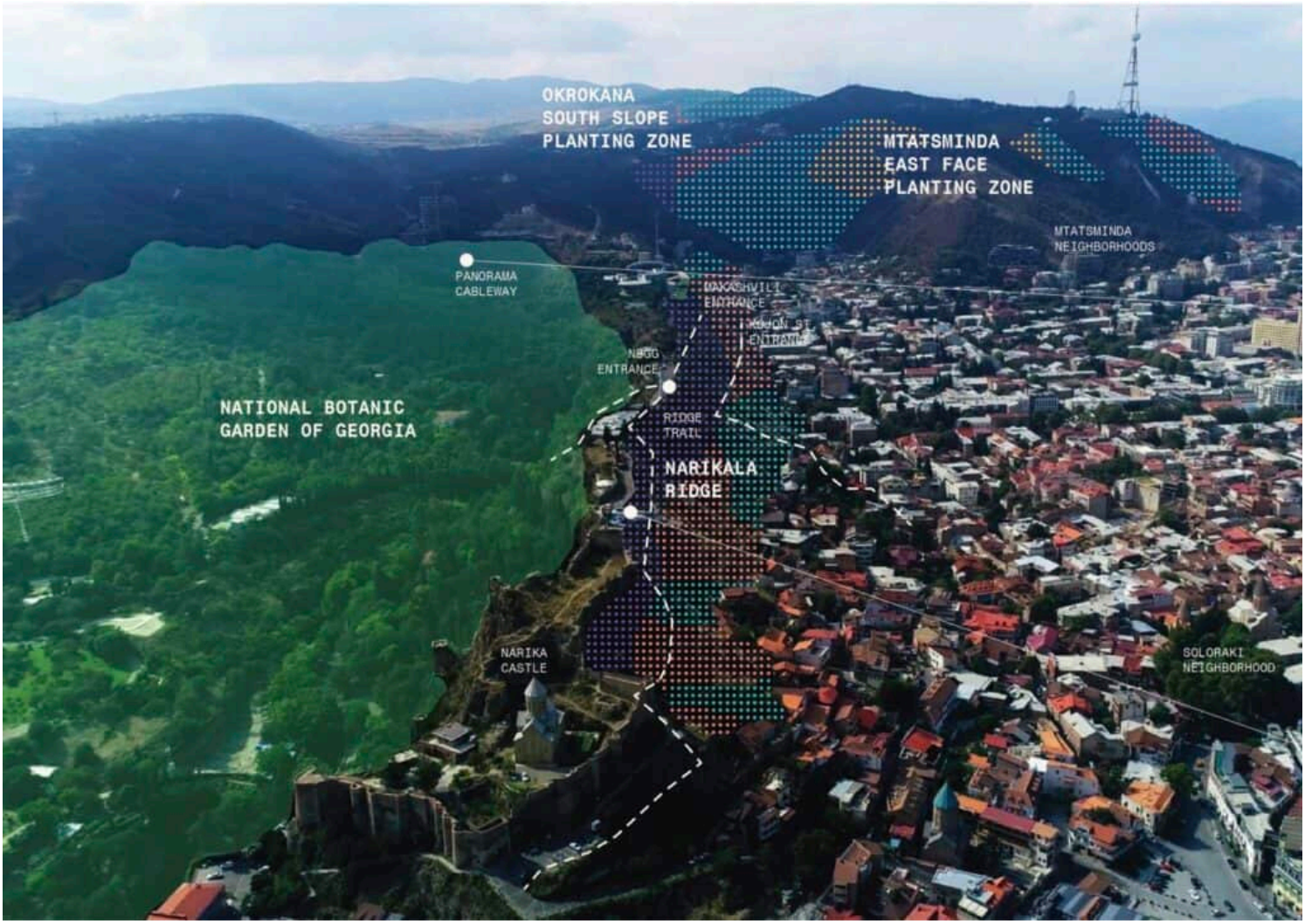

Ruderal adapted the work of environmental scientists to create detailed spatial plans for coherent "patches" of plant communities tailored to different soil and slope conditions. The species diversity and vertical heterogeneity of the plantings provide cover for wildlife.

As a leader in advanced computational methods for landscape design, Ruderal developed a parametric planting design tool to reconcile typical planting conditions with precise site-specific spatial data. The tool enables designers to quickly visualize the patches at various scales, adapt and optimize species mixes relative to nursery inventory, and simulate the interaction of diverse species over time. Trees for the project are propagated in Georgian nurseries and sourced from local seed

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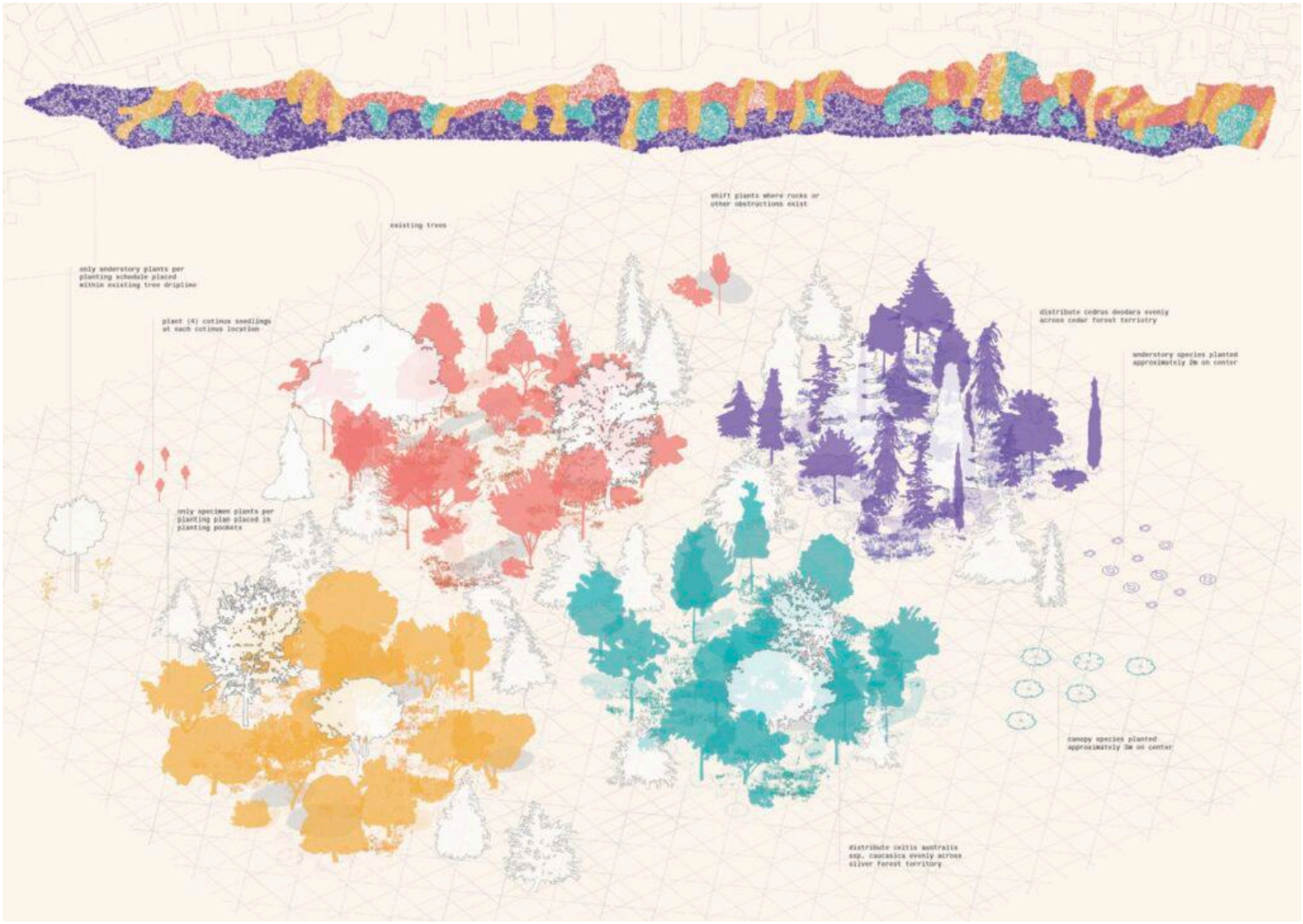
stocks, strengthening the connection to the surrounding ecological context and supporting a growing network of native plant nurseries.



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The Tbilisi Urban Forest by Ruderal has been nominated for the 2024 European Union Prize for Contemporary Architecture – Mies van der Rohe Awards (EUmies Awards).

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