Case Study 3

# Ellinikon Metropolitan Park

Landscape Institute

**SITE:** Ellinikon Metropolitan Park

**SIZE:** 243 Ha

**LOCATION:** Athens, Greece

**DATE:** 2025

**CLIENT:** Lamda Development

**DESIGN TEAM:** Sasaki / Doxiadis+

## Project Description

The Ellinikon Metropolitan Park is located on the southern side of the City of Athens and on the coast of the Saronic Gulf. It is the largest urban coastal park in Europe, occupying the site of the old Athens International Airport. The site is 486 Hectares, with half to be developed for luxury homes, hotels, shops, offices and a marina, and the remaining half to provide a public park.

## Approach to Low Carbon

The commitment of the client to be on the cutting-edge of sustainability from the outset has been critical in making reducing emissions and increasing sequestration the number one priority in the project. Calculations predict that the 40,800 metric tons of the project will be offset by the soft landscaping within 35 years and within 80 years will sequester an additional 37,000 tons, making the site a substantial carbon sink. The strength of these calculations is supporting low carbon approaches to ongoing construction.

## Carbon Calculations

Sasaki's Carbon Conscience App, Climate Positive Design's Pathfinder tool, and Atelier Ten's Carbon Analysis.

## Links

The Ellinikon Park – Sasaki
Carbon-First Design: The Ellinikon Metropolitan Park in Athens – THE DIRT
Mayfield Park — MANCHESTER CLIMATE READY




## THINK LIFECYCLE

- The park has been designed to provide a legacy landscape that will remain in perpetuity.
- The reuse of all 9,000 cubic metres of concrete from airport runways and tarmac in the new park will extend the lifecycle of these materials.
- The team have developed a low-carbon operations and maintenance manual that includes electric maintenance vehicles / machinery, and a composting programme.

## PROTECT CARBON STORES

- Rain gardens, daylighted culverts, green infrastructure corridors and a demonstration salt marsh will sequester carbon at the highest rates over 2 Ha.
- The 11 hectare Dry Mediterranean Mixed Forest, will sequester an estimated 3,300 metric tons over the study period.

## DESIGN RESPONSIVELY

- The seven green river valleys will form the framework to the site, enabling the regulation and retention of water across the site.
- An early-stage decision to swap out imported soil for amended soil is estimated to save approximately 43,000 metric tons of carbon across all phases of the project.

## LESS HARD, MORE SOFT

- A key aim is to increase coverage of plants and soils and only use hardscape in highly trafficked central areas.
- The park includes over 3.3 million native plants, including 31,000 new trees, with seeds collected from the site's existing ruderal grasses and geophyte species.
- Hard landscapes have been designed with stone or salvage concrete slab over aggregate base, so there is no concrete sub-base, or in other areas just stabilised aggregate surfaces.

## SPECIFY LOW CARBON

- High quality concrete will be saved for fountains, retaining walls and various hardscapes, medium quality concrete will be used as road base or riprap, and lowest grade salvage will be crushed up to fill in new landscape forms.
- An on-site solar energy facility will provide 100 percent of energy needs relating to the playgrounds, gardens, farms, and event spaces.
- Light-rail networks and a new bicycle network, will help reduce transportation-related emissions