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Sustainability Shapes Rwanda's Ellen DeGeneres Campus of the Dian Fossey Gorilla Fund

The Ellen DeGeneres Campus of the Fossey Gorilla Fund in Rwanda was purpose-built to save gorillas—and inspire a new generation of environmental advocates.

BY MATT ALDERTON IMPACT - AUGUST 23, 2023

The Ellen DeGeneres Campus of the Dian Fossey Gorilla Fund in Musanze, Rwanda. Image courtesy of Iwan Baan.

- **The 12-acre Ellen DeGeneres Campus of the Dian Fossey Gorilla Fund continues the legacy of primatologist Dian Fossey, embodying the principles of conservation and sustainability in every aspect of its design, construction, and operation.**
- **Architecture, design, and build firm MASS Design Group developed a measurement framework for the campus that evaluated mission-driven impacts in five areas: environment, economy, education, equity, and emotion.**
- **Green roofs, native plants, local materials, and a natural wastewater-treatment system are highlights of the project, which employed more than 2,400 Rwandans in its design and construction, accounting for 99% of project labor.**

Gorillas are grand, not only in size—the largest gorillas weigh up to **440 pounds**—but also in significance. Gorillas help maintain the tropical rainforests that humans rely on for clean air, crop-nourishing rainfall, and life-giving medicines.

Sadly, gorillas are dying. Their numbers have been dwindling for decades due to habitat loss, poaching, and disease, according to the World Wildlife Fund (WWF), which says the populations of eastern and western lowland gorillas in Central Africa have declined by **more than 50%** and by **more than 60%**, respectively, since the 1990s.

The mountain gorilla—a subspecies known for its thick fur and high-elevation habitat—is the exception to the rule. After falling precipitously in the 20th century, the population of mountain gorillas in Central Africa has increased from 620 in 1989 to approximately 1,004 today, **reports WWF**. The organization attributes this growth to conservation efforts by fearless gorilla protectors like **Dian Fossey**, a world-renowned primatologist who studied gorilla behavior in Africa's Congo Basin for nearly 20 years before her untimely death in 1985.

Fossey was found murdered in her cabin at Karisoke, the gorilla research center she established in 1967; theories vary about the motive, including the widely held belief she was killed as **revenge** for her outspoken crusade against the illegal poaching of gorillas. But even in death, she would not be silenced. Nearly 40 years later, the **Dian Fossey Gorilla Fund** continues her life's work by funding the conservation, protection, and study of gorillas and their habitats in Africa.

Its efforts are stronger than ever thanks to the 12-acre Ellen DeGeneres Campus of the Dian Fossey Gorilla Fund, a new multibuilding campus funded by the comedian and talk-show host's philanthropic Ellen Fund. The campus opened in February 2022 adjacent to Rwanda's Volcanoes National Park, where Fossey based her research. A collaboration of the Fossey Fund and MASS Design Group, the project marries conservation with contemporary **sustainability** to expand Fossey's legacy for a new generation of ecological activists worldwide.

A "Purpose-Built" Project

When MASS began working with the Fossey Fund in 2015, it introduced the organization to its "**Purpose Built**" design process, conceived in 2014 based on extensive research about how nonprofits and their funders can make the most of capital projects. Its research showed that capital projects are most successful when they're built around a mission-based objective that informs all design decisions. For the Fossey Fund, that mission is to make gorillas an entry point for a lifetime of conservation activism.

"The real inspiration for this project came from Dian Fossey, herself, and the great work that she was doing," says Emily Goldenberg, MASS architect and project director for the Fossey Campus.

Long before scientists understood climate change, and decades before the modern sustainability movement reached its present tipping point, Fossey understood that protecting gorillas required protecting their habitat. MASS and the Fossey Fund agreed that conservation and sustainability were two sides of the same coin. To integrate them in service of Fossey's legacy, MASS established a set of five impact frameworks to design the Fossey Fund's new campus, each measurable throughout the lifespan of the construction project. It calls them the "**five Es of impact**": environment, economy, education, equity, and emotion.

"We established specific goals for the Fossey Fund project related to each of those categories," Goldenberg says.

The campus represents an expansion of teaching, engagement, and laboratory spaces. Courtesy of Iwan Baan.

Environmental Impact: Saving Gorilla Habitats

The Fossey Fund has always promoted environmental stewardship. The genesis for the project's eco-friendly design was the small tent in which Fossey lived when she began studying gorillas in 1967. "The inspiration for the design came from her original tent at the Karisoke Research Center—this idea of a tent that would be surrounded by the forest canopy and how we could bring that ecosystem … onto the site as an experimental landscape," Goldenberg says.

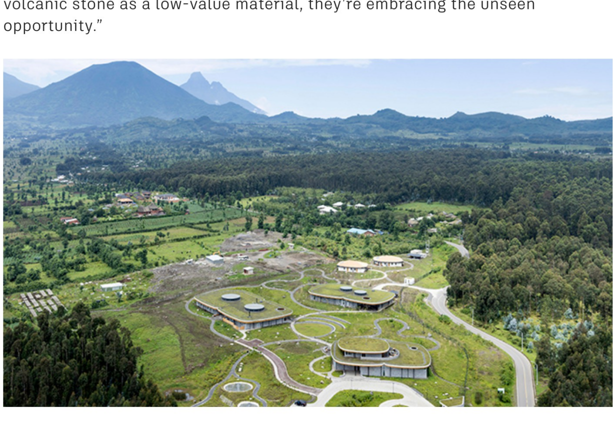
The buildings feature green roofs that blend seamlessly into the environment, covered patios, and walking paths that integrate with the local topography and surrounding volcanoes. "It's about being closer to the forest and really understanding what inspired Fossey to dedicate herself to the conservation of gorillas and their habitats so you feel closer to them as a species," she says.

Because the site was previously used for agriculture, turning it into a gorilla-worthy ecosystem required reclaiming it and transforming it into a reforested landscape that would **sequester carbon**, attract pollinators, and conserve resources.

Design features that accomplish this goal include rainwater harvesting in the roofs, a campus nursery that propagated more than 250,000 native plants for use on-site, and a constructed wetland for wastewater treatment. "The campus has unique sustainability features," says civil engineer Paterne Niyonkuru. "One of the features everyone is most excited about is the constructed wetland, the first of its kind in Rwanda."

Working with the environmental-engineering firm Transsolar, MASS maximized interior daylight and ventilation while also prioritizing the use of local materials, including regionally sourced pinewood for buildings' exterior soffit and interior ceilings. The most notable local materials, however, were volcanic stones harvested from the site during excavation, which typically are treated as waste. MASS used whole stones for building facades and crushed stones in the grout in between them and in landscape paving.

"The use of volcanic stone has inspired others in the area to think about using it as a building material in houses," Goldenberg says. "Instead of thinking of volcanic stone as a low-value material, they're embracing the unseen opportunity."



An aerial view of the campus reveals the buildings' green roofs. Courtesy of Iwan Baan.

Economic Impact: Creating Local Jobs

For MASS and the Fossey Fund, economic objectives were just as important as environmental ones in achieving a successful project. To that end, the campus construction contributed more than $5 million to the Rwandan economy and employed more than 2,400 Rwandans in the campus design and construction, accounting for 99% of total labor. "It was very important to both the Fossey Fund and our team that we hire locally as much as possible," Goldenberg says.

"This project has provided employment so we can support our families," adds porter Jean Pierre Sekaneza. "It also adds value to the sector we live in."

The project's economic impact was further amplified by **MASS.Made**, MASS's furniture-design studio, which designed all of the furniture on the Fossey Campus and sourced more than 1,600 items—including tables, desks, chairs, stools, benches, shelves, credenzas, beds, pendant lights, rugs, pillows, handles, and hooks—that were made in Rwanda by local artisans and design cooperatives.

Educational Impact: Training and Teaching

MASS didn't just hire local workers; it also developed them, according to Goldenberg, who says vocational training for the construction workforce was a major initiative on the project. "We understood the desire to provide something deeper than just a job," she says. "The construction industry can be seasonal. It's episodic. So it was really important to provide upskilling opportunities for the workers who were on-site."

Training was provided courtesy of the German Corporation for International Cooperation (GIZ) and the Integrated Polytechnic Regional College (IPRC) Musanze, which trained nearly 600 workers in the fields of masonry; carpentry; steel-fixing; health, safety, and environment; electrical; green roof installation; and plumbing.

"At the end of the training program, we provided certifications to all the workers to bring forward to other potential jobs after the project was completed," Goldenberg says.

Education also informed the project's landscape design. For example, growing native plants was a major priority. One reason was environmental: restoring the native ecosystem. The other was educational: giving researchers and visitors access to study gorilla habitats.

"The design intent of the project was to re-create the ecology and the biodiversity that we find in the forest as an education tool for people who are visiting," says Joe Christa Giraso, MASS landscape designer for the Fossey Campus. "When you visit the site today, you get to see and understand the growth of what has been planted. … It's an easier job for the researchers who are monitoring different species, because they now have specimens close to their offices instead of always having to hike two to three hours to get to what they're looking for."

Spanning multiple buildings and 12 acres, the campus anchors the region as a conservation hub in Africa. Courtesy of Iwan Baan.

Equity Impact: Creating Opportunities for Women

Like fellow primatologist Jane Goodall, who spent 60 years studying chimpanzees, Fossey was a woman scientist in a field dominated by men. Gender equity is an important part of her legacy, says Goldenberg, who adds that MASS honored that on the Fossey Campus by earmarking more than a third of available construction jobs **for women**, including 30% of construction-worker openings and 35% of leadership roles. "They want us to leave with more skills than we came in with," says porter Claire Manishimwe. "I was hired as a porter, and I am being trained as a steel fixer."

"We thought specifically about hiring and training **women in construction**, setting a goal for the project and making sure that we were meeting that goal through the full construction timeline," Goldenberg says.

According to MASS, some of the women who worked on the site created a women's group exclusively for female workers, supporting each other through on-the-job training, financial decision-making, and other professional and personal support. "The main thing that has surprised me is how we installed the green roof," says porter Aline Nyirarukondo. "Before working on this project, I knew nothing, but now I know about the materials and plants that are used."

Emotional Impact: Building Buy-in

Emotion, the final "E" in MASS's five Es of impact, was evident in the subjective measures that complemented MASS's objective metrics.

"We were thinking not only about the direct numbers related to impact but also about how people in the community—and people who are working on-site—feel about the project," Goldenberg says. "We fielded a number of interviews with construction workers and initiated surveys on-site to better understand people's perception of the project's goals and to hear directly about how things were going and how they thought the project might impact the region."

"I've been so inspired by everyone's hard work over the past year and am deeply impressed by how the campus is creating change here in the area of Volcanoes National Park and beyond," says porter Fabien Nshimiyimana.

Saving Gorillas and the Planet

From environment to emotion, technology was a key enabler of all impact targets, according to Goldenberg, who says MASS used Autodesk **Revit** to create 3D models that made it easier to analyze and simulate project impact, share information with partners, and sequence construction activities for maximum productivity.

The campus is integrated into the landscape surrounding Volcanoes National Park. Courtesy of Iwan Baan.

"Revit was a tool we used not only for designing the building but also for documenting and detailing," Goldenberg says. "The tool was a platform to **streamline our design process** and be more efficient in our decision-making. It allowed us to come to answers quickly so we could spend more time on the things that are most impactful about the project."

The positive results will yield benefits not only for gorillas but also for humans in Central Africa and beyond.

"From the outset, the mission of this project was focused on creating a space to engage the many stakeholders in conservation—students, scientists, tourists, conservation partners, community members—to advance our collective goal of saving gorillas and, more broadly, the planet," Fossey Fund President and Chief Scientific Officer Dr. Tara Stoinski said in a June 2022 **press release** celebrating the opening. "The beauty of the campus elevates people's thinking about conservation, helping them realize how important conservation is. This shift is not just important for the Fossey Fund, but for the region and the world."

"The Ellen DeGeneres Campus of the Dian Fossey Gorilla Fund offers a powerful example of what is possible when we expand the role of the architect beyond the typical phases of design and construction to accompany a partner along early phases of visioning and planning," echoed MASS Design Group Co-Executive Director Christian Benimana. "When we design for as much impact as possible, we create new opportunities. This campus will model ways for global conservationists to bind ecosystems and communities in support of one another."

ABOUT THE AUTHOR

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Matt Alderton is a Chicago-based freelance writer specializing in business, design, food, travel, and technology. A graduate of Northwestern University's Medill School of Journalism, his past subjects have included everything from Beanie Babies and mega bridges to robots and chicken sandwiches. He may be reached via his website, MattAlderton.com.

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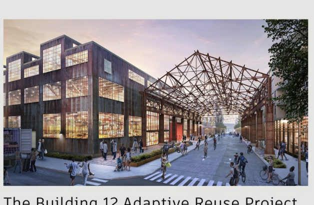

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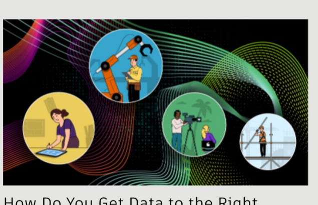

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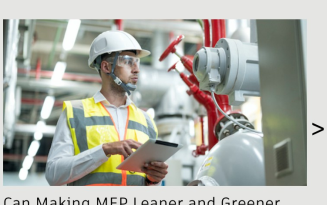

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