Green Terraces & Gardens

[Project title]

AW20-IKYCG

[Project ID]

LafargeHolcim Awards (Main Category)

Douglas Toscano, a happy, committed and generous leader, hopeful of a better future for all

General Project Data

Project Group 2	Landscape, urban design, transportation infrastructure and public utilities
Competition region	Latin America
City	Quito
Country	Ecuador
Client	The Guest House with Yellow Balconies Quito
Intervention	Conversion
Status of planning	Advanced design stage
Status of permission	Approval/license not required
Planned start	Jul-Dec 2019
Project background	Private investment
Latitude	0°13'02"S
Longitude	78°30'05"W
Elevation	3000
Other competition	no

Project Contact

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Project Summary

Our concept is: "Take the habitat to your home". Looking at the city of Quito and most cities in Latin America and their surroundings we see that many of its houses have very neglected terraces to the point of being used only as clothing hanging spots or storage sites, full of cement without any decoration, even decayed and in general out of care. It is our vision that this doesn't have to be this way, we can live better, and that, under a manageable budget, the terrace can become a garden, a play space for children, for meetings and a source for family and neighbors union and recreation for its owners. We will offer renovation of terraces for middle class families at affordable prices and then integrate this space as an alternative for reunions, recreation and the love of plants.

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Project Details

Construction costs	2500 USD
Site area	105 sq m
Footprint area	105 sq m
Floor area ratio	
Site occupancy ratio	100

Further relevant key figures

Materials

As of now: Ceramic tile, brick facade, synthetic grass, metallic mesh (net), bamboo, white paint; Future investments: drapers, endemic plants and creeping vines, solar panels and water collectors

CO_2 Lifecycle Assessment

We believe that in our previous statements we have layout many good points that how our project will serve to reduce the carbon footprint in a city which are worth to review in this section. 1.) Use of alternative layouts and materials from the beginning and use less non-friendly materials such as concrete blocks. 2.) Use of endemic plants, nurseries and vertical gardens in terraces which in the longer term as it spreads its use to more houses will decrease the amount of CO2 3.) Use of solar panels and most importantly water collectors installed in the terrace to flush toilets using rain runoff from terraces. 4.) We strongly believe that this project can bring communities together as with a nicer and green space, people will be more likely to invite their families and neighbors over.

Statements on Sustainability

Endemic Plants and Reduction of CO2
Quito as many other cities in the world suffer from pollution and a bad quality of air. As an alternative, in Europe specially, changes that may seem insignificant but are actually very effective, have been proposed. One of these is to implement green spaces in terraces. Our proposal is to encourage the presence of plants in the top of houses and buildings which can help to reduce by 50% the amount of CO2 present in the atmosphere. We will focus specially in the use of endemic plants targeted by the region of the country, altitude and other factors so we can bring back flowers, trees, bushes that may have been forgotten in time or not known at all by these generations. We will provide a guide as to how to take care of these plants and will implement other ideas such as vertical gardens.

Sustainable materials
Our main goal in our project is to use affordable and sustainable materials for the renovation and transformation of the terraces. In our pilot project, for instance, our original idea was to build a wall using concrete but because of costs, time and most of all sustainability, we improvised and chose to use bamboo instead. At the end we saved money and time plus the end result gave us an inspiration to use these kind of materials for our further projects. For these, we have many options such as: bricks made or recycled material or adobe (sun-dried brick). As our company progresses, we envision a project made of extensive green roofs which require a minimal of attention and a once a year visit. Our vision also includes the implementation of natural grass, nurseries and wood pergolas.

Solar panels and water collectors
The city of Quito is in the middle of the world and is 2800 above sea level which makes it very close to the sun. Despite this fact, hardly none of the houses here use solar panels as a source of energy for their homes. Also, from the months of November to April, the city receives a substantial amount of rain and again none of the houses use this opportunity to collect and use water for their homes. We want to use our green terraces project to inspire and encourage families and use what has been described as a source of energy and water for their homes. As a result, families can save a substantial amount of money in electricity and water bills. But because of its initial cost, at first, we mostly want to foster the use of water collectors to flush toilets using rain runoff from terraces.

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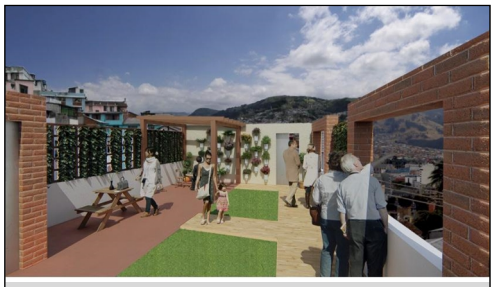
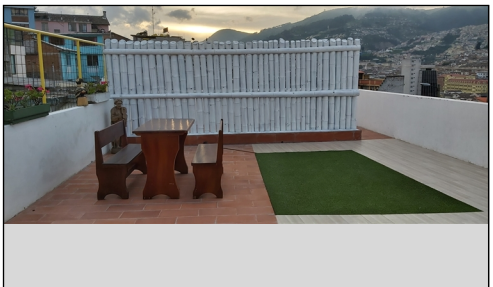
Project Visualization

As you can see this is the before picture. Most terraces in Quito are the way you see here, not been taken care of and usually used only to hang clothes. Our vision is that this is a waste of space, specially on this image where the spectacular view is wasted with the abandonment and poor condition of the installations. It is our belief that with little investment, you can transform this space for the enjoyment of your family and yourself, using affordable and

This is the after picture and the pilot project is only 70% complete. As you can see, even at this percentage, the difference compared to before is tremendous. People living at the apartment have reported that now they awake with more joy and do more activities at the terrace such as cooking, reading or working. They want to invite their family more often so they can also enjoy the space. We deeply believe this feeling can be reciprocated in whole communities and neighborhoods in Ecuador.



Final project design.

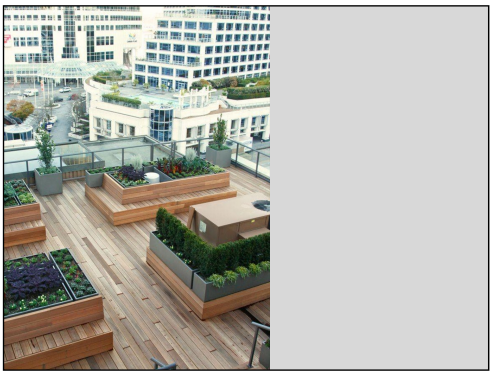


We are ready for the final stage with plants and decoration

View from a different point of view

Another before picture

Water collector that we want to install in our terrace project



At a later stage we want to install gardens and nurseries like these ones in Vancouver, CA

View from the terrace to the outside, as you can see, most terraces in Quito are left unkempt