

Landgoed Bolivia, or Bolivia Estate, is an area in the northeastern corner of the island of Bonaire. The former plantation has a size of approximately 2,850 hectares. Bonaire Properties N.V. has initiated the redevelopment of the estate, in which recovery of nature is a central issue. Apart from this, 1,150 dwellings will be built, there is room for agricultural activity, and several eco-resorts will be developed. More than 85% of the area remains open landscape.

THE URGENCY

Nature under pressure

The former plantation Bolivia is a home to rare dry tropical forest. However, this tropical forest is under enormous pressure and has deteriorated significantly over the last decades. This is shown by research into the state of vegetation in the area, commissioned by Bonaire Properties N.V. and executed by Carmabi (Houtepen, 2021). When results are compared to earlier research (Stoffers, 1956; Debrot et al., 1998; De Freitas et al., 2005), it becomes visible that mainly invasive grazers (goats and donkeys) are the cause of the degradation. However, some parts are still better developed and could serve as a seed bank for recovery of the entire area. In addition to the grazing, soil run-off into sea threatens the coral reefs and other vulnerable sea life around the island.

Housing market under pressure

The Bonairean housing market lacks opportunities for groups who don't qualify for social housing. This causes families to have multiple generations living in one house, resulting in overcrowded households. Moreover, estimations by the Central Bureau for Statistics show that the island population has grown substantially and will remain to do so. In 2011, 15,680 people inhabited the island, which grew to the amount of 21,745 in 2021, and is estimated to grow to the amount of 27,000 in 2030. This is an increase of 72% in 20 years.

Economy under pressure

Bonaire largely depends on import for its food supply. This means the food supply on the island is vulnerable in the face of fluctuations in the economy and food provision is relatively expensive. In addition, there are possibilities to diversify and extend the economic proposition for tourism on the island, in order to make the sector more robust and attract a more diverse range of tourists. In turn, this creates opportunities to broaden economic activity on the island.

Nature recovery

By actively managing the estate and by an innovative way of housing parcellisation (see next page), surrounding nature is being given space to restore. A combination of removing invasive grazers and re-planting native species enables the dry tropical forest to mature, in only a few years, to a point at which it can maintain itself. By light interventions in the landscape, soil run-off is prevented, which improves living conditions for sea life around the island. By regulating access to several parts of natural importance, sea turtles and bats will be able to forage and breed in peace.

Affordable housing

Housing on Bolivia will consist for more than 30% of affordable housing. In this way, opportunities will be created for the island's inhabitants to find a house that fits them. The remaining housing supply will provide housing for the growing population, such as western immigrants, to generate the revenue needed to carry out the measures to restore nature. In total, 5,6% of the estate is dedicated to housing development.

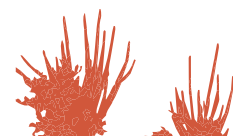
Agriculture and tourism

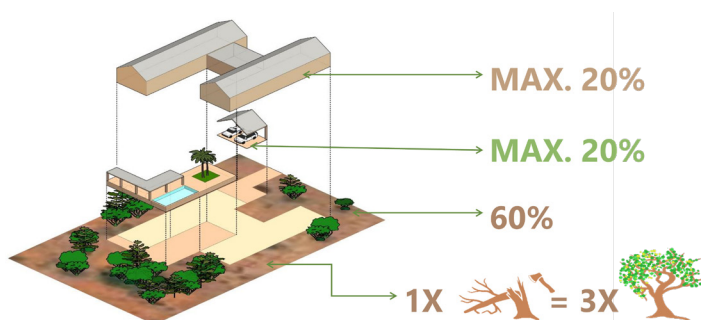
By innovative forms of agriculture, such as combining aquaponics and algae with growing vegetables, a big step can be taken towards the self sufficiency of Bonaire concerning food supply, with a relatively low claim of space and in a circular manner. The redevelopment also concerns several locations for high-end tourist accommodations, to diversify the tourism sector. In this way new facilities will be complementary to existing accommodations and will not create unwanted competition. This fits the profile of the 'Blue Destination' that Bonaire aspires to be. By increasing local food production and diversifying the economic backbone, the island will become more self-sufficient. Approximately 3,5% of the estate gives room to agriculture and 1,8% for tourism.

Sustainable, decentralized and circular

By the spatial design, nature is given all the opportunity to recover. Through a decentralized and circular sewage system, waste water is being transformed into water that qualifies for irrigation. Also, several agricultural concepts can make use of each others waste flows. With innovative, decentralized and sustainable energy production, it's not necessary to install extensive networks of pipes and cables in the rock hard soil.

Landgoed Bolivia, or Bolivia Estate, will be developed into a future proof and adaptive landscape park, that can contribute to the solution of Bonaire's social-economic challenges.





Plot- and housing principles: The house and garden together form a maximum of 40% of the plot. In the design of the house, optimal use is made of passive climate principles.

