

Accessing a cocoa plantation with a permanent steel bridging solution

Bridging Case Study



Caiman Feliz Bridge, Nicaragua



Customer: Ritter Sport Nicaragua, S.A. | **Solution:** Compact 200™

The Challenge

Access to half of a cocoa plantation in the remote and rainy La Raas region of Nicaragua relied on an old pedestrian timber bridge that became inaccessible with annual floods. The bridge often had to be 'rebuilt' each year. The owners of the plantation, Ritter Sport, the global chocolate producers, had already planted half of the 3000 hectare farm and now needed to access the other side, across a tributary of the Kama river. In the summer the river is about 8m wide but in winter it can reach 60m, with water level rising to above 6m. Ritter decided to replace the bridge as part of an overall agricultural road upgrade. This new bridge needed to be robust enough to handle the very heavy construction plant for building the access road, as well as the continual comings and goings of the cocoa plantation trucks.

A history of investment and socio-economic challenges in Nicaragua led to the customer approaching Mabey Bridge to tap into their local support and knowledge. Mabey Bridge's experience was invaluable in allowing the project to move forward, providing reassurance for all the parties involved.

The Solution

The customer asked Mabey Bridge to propose several options in order to reach the most cost-effective solution for developing the project. A Compact 200™ was chosen as the optimum solution, satisfying key investors to enable the project to go ahead.

During installation the road level had to be raised to 6m and the bridge span increased to more than 60m to allow for the elevated level. Road level alignment was a challenge, but overcome, and the rainy season arrived earlier – potentially delaying construction. However, the Compact 200™ steel bridge solution was capable of being erected in the most adverse of weather conditions. The final scheme involved a 61.5m, two span, single truss construction with a 60T load carrying capacity.

The Results

Previously, when the only access had been a small wooden pedestrian bridge, the plantation workers had an arduous walk of between two and four hours to get to the other side and work the other 1500 hectares. With the new bridge the route is reduced to 20 minutes and they can now transport vehicles and supplies for the new plantation area.

Project Engineer Wilfredo Velasquez was delighted with the result: "The bridge was built within the facilities of Finca El Cacao owned by Ritter Sport Nicaragua S, A, which is a cocoa farm. The farm has a special characteristic because it is divided by the Kama River into two equal parts. The bridge allows us to connect the north and south parts of the farm quickly and safely, guaranteeing the mobilisation of agricultural machinery, supplies and transfer of internal personnel."



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