

Enabling major dam construction works in remote and challenging location

Bridging Case Study



Lluto Bridge, Peru

Customer: Empresa de Generación Huallaga SA | **Solution:** Mabey Compact 200™



The Challenge

Scheduled to start operations in 2016, the 203m high Chaglla Hydroelectric Dam is a major construction project that will be capable of generating 456MW. However, development of the dam is challenging due to the remoteness of the area and the topography of the landscape.

Robust and safe access roads are paramount to such a major construction. The majority of site traffic will be heavy construction vehicles and machinery. When sturdy bridging capable of heavy loading was required for the approach roads, the developer Empresa de Generación Huallaga SA, a subsidiary of the Odebrecht Group, turned to Mabey.

The Solution

In total, six bridges were needed on the approach roads to the Chaglla Dam construction project. Approximately three hours drive from the province of Huanuco, located in Central Eastern Peru, the area is dramatically mountainous and remote.

Due to the speed with which the Empresa de Generación Huallaga SA hoped to build the approach roads, the company ordered an extra five-bay bridge that, if necessary, could surrender its parts if any of the bridges had to be increased in size. This was to prove useful immediately.

The first bridge to be constructed - the Lluto Bridge – was planned as a two-lane, five-bay Mabey Compact 200™ bridge. However, after surveying the area the developer increased the specification to a nine-bay bridge.

The bridge was situated over a rocky ravine and the launch was particularly complex. The 'male' end launch plane had only 18m space, which was nowhere near enough, while the 'female' launch plane had only 37m. Because of this, the bridge was assembled and launched back to front. Steep rocky banks alongside the launch planes added to the difficulty, as did the severity of their slopes. However, Mabey had a representative and a technical engineer on hand to ensure the bridge was built and launched correctly.

The Result

None of the bridge installations on the Chaglla Dam approach roads was simple. The remoteness of the location and the difficult topography of the area presented considerable challenges. Yet the bridges have all been installed successfully and are providing robust solutions for getting plant to and from the dam construction site.



The largest free span bridge is the 'Dam Bridge' at 54.8m and capable of supporting a load of 50 tonnes. The bridge with the greatest clearance and load capacity is the 'Puente Huallaga 2', with a 51.8m and load capacity of 213 tonnes.

When completed, the energy produced by the Chaglla Hydroelectric Dam will increase the energy potential of the country, allowing further growth of the wider economy.

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