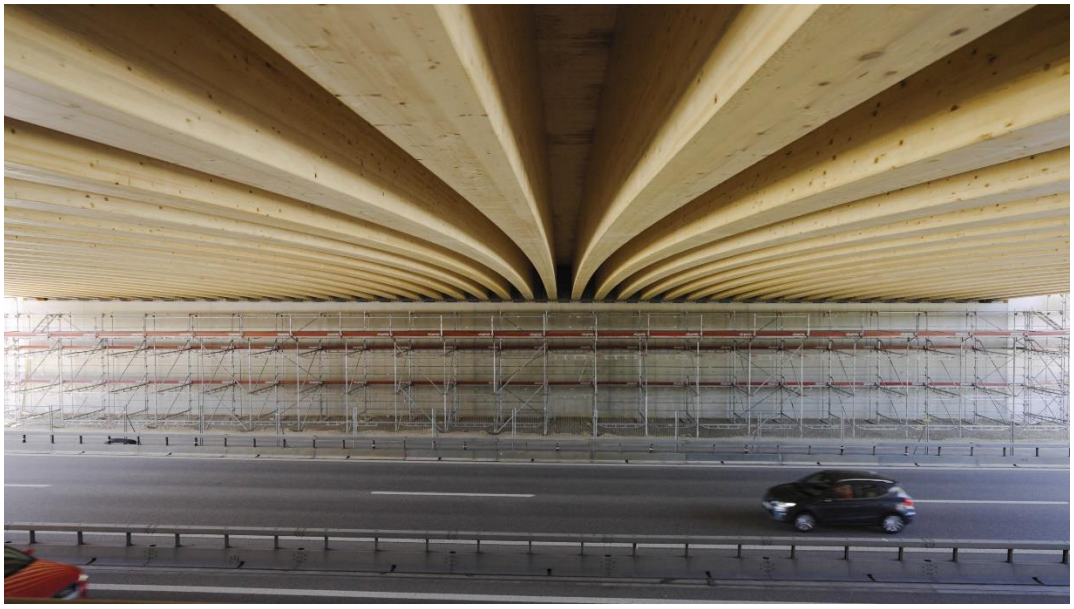
BUILDING FOR LIFE

Press release

29 January 2026

BOUYGUES CONSTRUCTION BUILDT ONE OF THE WORLD'S FIRST POST-TENSIONED TIMBER BRIDGES TO PROTECT BIODIVERSITY

Through its subsidiary, VSL International, Bouygues Construction has contributed to building one of the world's first bridges in post-tensioned timber. Located in Switzerland between Zurich and Bern, this wildlife crossing, commissioned by the Federal Roads Office (ASTRA) spans the motorway and the Koppigen cantonal highway.



©Dersu

The structure enables wildlife to cross the road linking Zurich and Bern safely. Until now, there had been an insurmountable barrier between two natural areas. The restoration of ecological connectivity made possible by the Koppigen bridge helps reduce the fragmentation of natural habitats and limit the number of collisions between wildlife and vehicles, which is damaging for biodiversity and road safety. Covered with approximately one metre of earth and vegetation, the bridge forms a continuous ecological corridor.

Technically speaking, the project presented the unprecedented challenge of building a post-tensioned structure using timber, a bio-based material entailing low carbon emissions. The timber superstructure consists of two spans, including the 37-metre main span, which support a concrete slab, backfill and a covering of earth and vegetation. The heavy loads

generated by this configuration required the use of post-tensioning technology, a method that had previously been rarely employed in timber structures.

The VSL International team adapted technology that was originally developed for concrete for application on timber. They designed a customised solution based on a large steel plate equipped with numerous small anchorages. This allowed high post-tensioning forces to be distributed evenly without damaging the timber.

The project draws on several years of research and testing carried out in Switzerland, in collaboration with the Higher Technical School of Wood, Biel, and ETH Zurich. These studies confirmed the benefits of post-tensioning wood, particularly with regard to enhancing its load-bearing capacity, reducing deformation and making long-term maintenance easier.

By demonstrating that timber can be used for complex, highly stressed infrastructure projects, Bouygues Construction is paving the way for new low-carbon construction solutions that combine technological innovation with structural performance.
Bouygues Construction has been involved in the construction of a number of landmark projects, such as the Hong Kong–Zhuhai–Macau Bridge in China and the Simone Veil Bridge in Bordeaux, France.

ABOUT BOUYGUES CONSTRUCTION

Bouygues Construction employs 35,600 people around the world, all driven by the greatest and most exciting responsibility of all – building for life. In more than 50 countries, we improve daily life for millions of people by creating structures and buildings that serve life and address all our needs: shelter, healthcare, education, work, entertainment, travel, access to low-carbon energy, etc. At every stage of a project, we put all our expertise and our experience into designing, renovating and building differently so that we can meet the critical imperatives of the environmental transition and achieve construction that is sustainable and less resource-intensive. Every day, we make sure that everyone is safe, and that human rights and ethical standards are respected. Committed to strong values, the men and women of Bouygues Construction work passionately alongside their customers and partners so that our footprint becomes ever more positive. In 2024, Bouygues Construction generated sales of €10.3 billion.

PRESS CONTACTS

Candice Broche +33 7 6082 6022 – c.broche@bouygues-construction.com
Céline Badet +33 6 9982 3567 – c.badet@bouygues-construction.com

Find all our news on https://mediaroom.bouygues-construction.com