The deconstruction project that preceded the construction of the Mix’City project in Renens (VD) began with the demolition of an old office building. The concrete elements, in particular the slabs and load-bearing pillars, were extracted from the existing office building and used to create the load-bearing structure for several new projects in the region.

The main idea behind this deconstruction project was to cut the existing slabs and pillars into predefined elements on the deconstruction site. These elements were then reused in various projects, including a community pavilion in Ecublens, a retaining wall for Mix’City, a bicycle shelter, and finally, a boulodrome in Renens. For this last project, the use of recycled concrete structural elements reduced the building’s carbon footprint by over 90%.

The key innovation in this project was the straightening of the slabs to use them as load-bearing walls, on which a timber frame was installed.

By straightening the slabs, they worked mainly in compression, which was perfect for concrete. In addition, tests showed that these recycled concrete elements had excellent strength, making them almost more efficient than new one.

This project of deconstruction and reuse of concrete structural elements was part of a trend to conserve resources and reduce the environmental impact of the construction. Challenges remained, however, particularly in terms of accurately calculating costs and reducing the drudgery of the deconstruction process. Despite these challenges, the future looks bright for deconstruction and reuse initiatives at Steiner Construction.

On the strength of this first successful experience, Steiner Construction intends to capitalize on this project to offer even more innovative and eco-responsible solutions to its clients in the future.