

Zug | October 6, 2021

ETH Zurich and Holcim unveil innovative and sustainable floor system

- **Lightweight solution lowers embodied CO₂ footprint by up to 80%**
- **Low-carbon and circular benefits enhanced by Holcim's green concrete, ECOPact Plus**
- **Industrial production as precast floor solution in development**

The Swiss Federal Institute of Technology (ETH Zurich) and Holcim introduce today an innovative lightweight floor system with an 80% lower carbon footprint compared to traditional structures with no compromise on performance. The floor solution was designed by Block Research Group (BRG) of the Swiss Federal Institute of Technology (ETH Zurich) using the principles of strength through geometry. The sustainability profile of the floor solution is driven by its smart design, using 50% less materials, its green concrete with Holcim's ECOPact Plus offering a 33% lower carbon footprint¹ and its circularity profile using Holcim's ECOPlanet green cement with 20% recycled construction and demolition waste inside. With traditional floor slabs in reinforced concrete accounting for 40% of the concrete mass of medium-rise buildings, the combination of smart design with green and circular building materials makes sustainable construction possible at scale. This breakthrough in sustainable floor construction is implemented for the first time in the HiLo (High Performance, Low Emissions) innovation unit at NEST (Next Evolution in Sustainable Building Technologies) in Dübendorf, Switzerland.

Jan Jenisch, Holcim CEO: "This innovative floor system represents a real breakthrough in sustainable construction. It is a great example of how our key levers to net-zero building add up to make a real difference, from green concrete, to smart design, all the way to circularity. What's exciting is that all this innovation is to put to work in a floor system that can be deployed at scale. With today's rise in population and urbanisation, we expect to be building ten billion square meters of floors each year to house two billion additional people in cities by 2050. I am committed to accelerating the deployment of such green building solutions to make our cities work for people and the planet."

Philippe Block, co-director of the Block Research Group at ETH Zurich: "When it comes to finding sustainable construction solutions, floor slabs are a key challenge. Arched and vaulted geometries offer truly disruptive savings by enabling the use of low-carbon materials in much lower volume than before."

The floor system's design eliminates the need for embedded steel reinforcement, making it easy to recycle. Building functionalities such as efficient hydronic heating and cooling systems can be seamlessly integrated. Holcim and BRG are currently developing the floor system into a precast solution, targeted to be available for industrialized construction in 2023.

¹ Compared to conventional concrete, using CEM I cement

This solution represents how Holcim's commitment to net-zero building is in action. Making low carbon construction possible at scale, Holcim launched the world's first global ranges of green concrete ECOPact and green cement ECOPlanet, now available worldwide. To build more with less, Holcim enables smart design with technologies like 3D printing that can reduce up to 70% of material use. To build new from the old, it is driving the circular economy as a world leader in recycling, such as with the launch of the world's first green cement with 20% recycled construction and demolition waste inside. For breakthrough impact beyond 2030, Holcim is piloting next generation technologies like carbon capture utilization and storage, recycling its CO2 in many ways - from crop growth in greenhouses all the way to using it as a source of alternative fuel for aviation. To scale up its impact, Holcim is actively partnering with like-minded organizations. It serves as a founding member of the First Movers Coalition, launched by Secretary John Kerry, the United States Special Envoy for Climate, to accelerate our world's transition to net zero. Holcim is also a founding member of the MIT Climate and Sustainability Consortium to put innovation to work in a cross-sectoral way for more impact.

About Holcim

Holcim builds progress for people and the planet. As a global leader in innovative and sustainable building solutions, Holcim is enabling greener cities, smarter infrastructure and improving living standards around the world. With sustainability at the core of its strategy Holcim is becoming a net zero company, with its people and communities at the heart of its success. The company is driving the circular economy as a world leader in recycling to build more with less. Holcim is the company behind some of the world's most trusted brands in the building sector including ACC, Aggregate Industries, Ambuja Cement, Disensa, Firestone Building Products, Geocycle, Holcim and Lafarge. Holcim is 70,000 people around the world who are passionate about building progress for people and the planet through four business segments: Cement, Ready-Mix Concrete, Aggregates and Solutions & Products.

More information is available on www.holcim.com

Important disclaimer – forward-looking statements:

This document contains forward-looking statements. Such forward-looking statements do not constitute forecasts regarding results or any other performance indicator, but rather trends or targets, as the case may be, including with respect to plans, initiatives, events, products, solutions and services, their development and potential. Although Holcim believes that the expectations reflected in such forward-looking statements are based on reasonable assumptions as at the time of publishing this document, investors are cautioned that these statements are not guarantees of future performance. Actual results may differ materially from the forward-looking statements as a result of a number of risks and uncertainties, many of which are difficult to predict and generally beyond the control of Holcim, including but not limited to the risks described in the Holcim's annual report available on its website (www.holcim.com) and uncertainties related to the market conditions and the implementation of our plans. Accordingly, we caution you against relying on forward-looking statements. Holcim does not undertake to provide updates of these forward-looking statements.