



**Renovation wave:
“potential economic
and ecological silver bullet”.**

Reducing the carbon footprint of Europe's construction

Sustainable construction is vital in the fight against climate change. Europe's construction sector needs to reduce its carbon footprint in order to contribute to the fight against climate change. This requires a process of continuous innovation in the efficient use of resources that make up construction products, efficient use of energy in the production process, and improving the thermal properties of building envelopes.

The renovation wave

The Renovation wave is a “potential economic and ecological silver bullet” according Commission Vice-President Frans Timmermans.

It will bring many social, environmental and economic benefits, but first of all ensure **minimum energy performance standards for old buildings**.

It will play an important role in delivering on the energy efficiency targets for buildings. The key objective for the European Commission is to **at least double or even triple the renovation rate of buildings**, which currently stands at around 1.3%. This initiative shall contribute strongly to achieving the EU's recently raised climate targets for 2030 and the goal of net carbon neutrality in 2050 by increasing the energy efficiency of the European building stock.

Also demolition and new build

Demolition and new build can ensure a state-of-the-art energy performance which is not always possible when upgrading old building stock, as well as allow for building design to be tailored to the needs of inhabitants.



EAACA: the voice of the AAC industry

The European Autoclaved Aerated Concrete Association (EAACA) promotes renovation as means to modernise buildings and make them more energy efficient and better place of living.

We believe the our industry can play a crucial role since AAC products comply with new energy efficiency standards and are 100% recyclable.

EAACA in numbers



19 member countries
in Europe



101 production plants



17,5 mio m³
of AAC per year



400 000
houses to be build

EAACA: Urban Transformation & European Green Deal

We believe that the Green Deal will help transform our urban areas into thriving environments where humans and nature can co-exist in a sustainable manner.



ROBERT TURSKI
President of EAACA

CLIFF FUDGE
Board Member
Chairman of Strategy Committee

TORSTEN SCHOCH
Board Member
Secretary General of EAACA
Chairman of Technical Committee

HAN DEN HARTOG
Chairman of Marketing Committee



AAC – the right building material for renovations

The unique characteristic of AAC

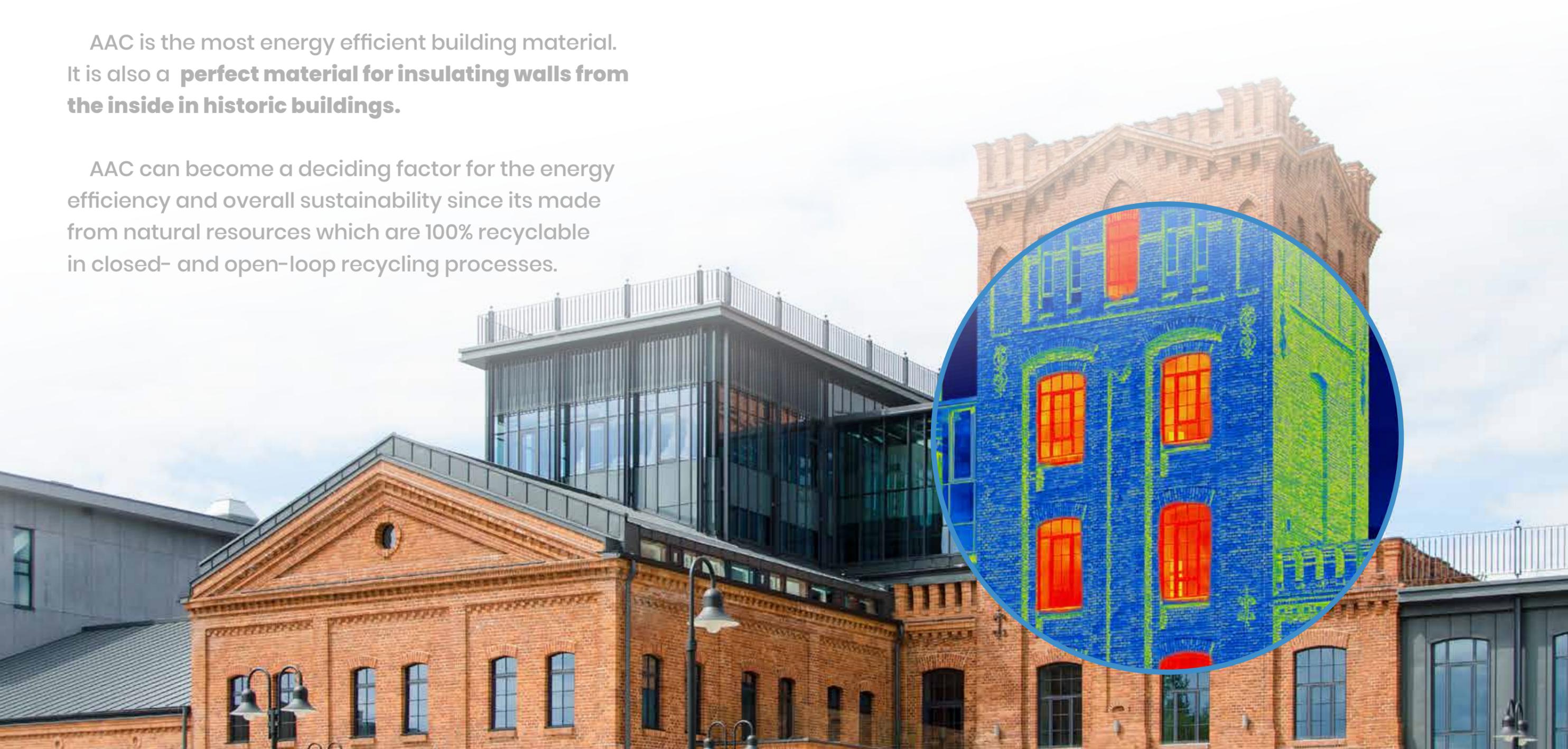


Excellent thermal insulation and sustainability

AAC is the most energy efficient building material. It is also a **perfect material for insulating walls from the inside in historic buildings.**

AAC can become a deciding factor for the energy efficiency and overall sustainability since its made from natural resources which are 100% recyclable in closed- and open-loop recycling processes.

The image below is a thermal image of the AAC insulated building from the inside. It shows that the building is cold on the outside which means that the insulation effectively keeps warm air inside the building.



Other AAC characteristics



Resources

AAC is made from naturally occurring materials that are found in abundance – lime, fine sand, other siliceous materials, water and a small amount of aluminium powder (manufactured from a by-product of aluminium).



Environmental impact during production

The manufacture of AAC requires less energy than for all other masonry products, thereby reducing use of fossil fuels and associated emissions of carbon dioxide (CO₂). Industrial-quality water is used and neither water nor steam are released into the environment. No toxic gases are created in the production process.

Raw materials are wasted in the production process and all production offcuts are fed back into the production circuit. Even with some processes where a small amount of surplus material is left over after curing, this is ground and recovered for other uses.





Fire resistance

Autoclaved aerated concrete provides the highest security against fire and meets the most stringent fire safety requirements. Due to its purely mineral composition, AAC is classified as a non-combustible building material. It is both resistant to fire up to 1200°C and, unlike other construction materials, heatresistant.



Environmental impact during use

AAC's excellent thermal efficiency makes a major contribution to environmental protection by sharply reducing the need for space heating and cooling in buildings. In addition, AAC's easy workability allows accurate cutting that minimises the generation of solid waste during use. Unlike other building materials AAC does not need to be used in combination with insulation products, which increase the environmental impact and cost of construction.



Reuse, recovery and disposal

Throughout the life cycle of AAC, potential waste is reused or recycled wherever possible to minimise final disposal in landfill. Where AAC waste is sent to landfill, its environmental impact is minor since it contains no toxic substances.





**Examples of
successful
renovations
thanks to AAC**

Before



CHALLENGE 1.

Construction of new load-bearing walls inside the old structure of the former railway post office.

CHALLENGE 2.

Adaptation of brick walls of the railway station to modern thermal standards.

After



SOLUTION 1.

Light and durable Ytong blocks that do not overburden the old structure.

SOLUTION 2.

The use of Multipor panels from the inside without interfering with the historic facades.

Before



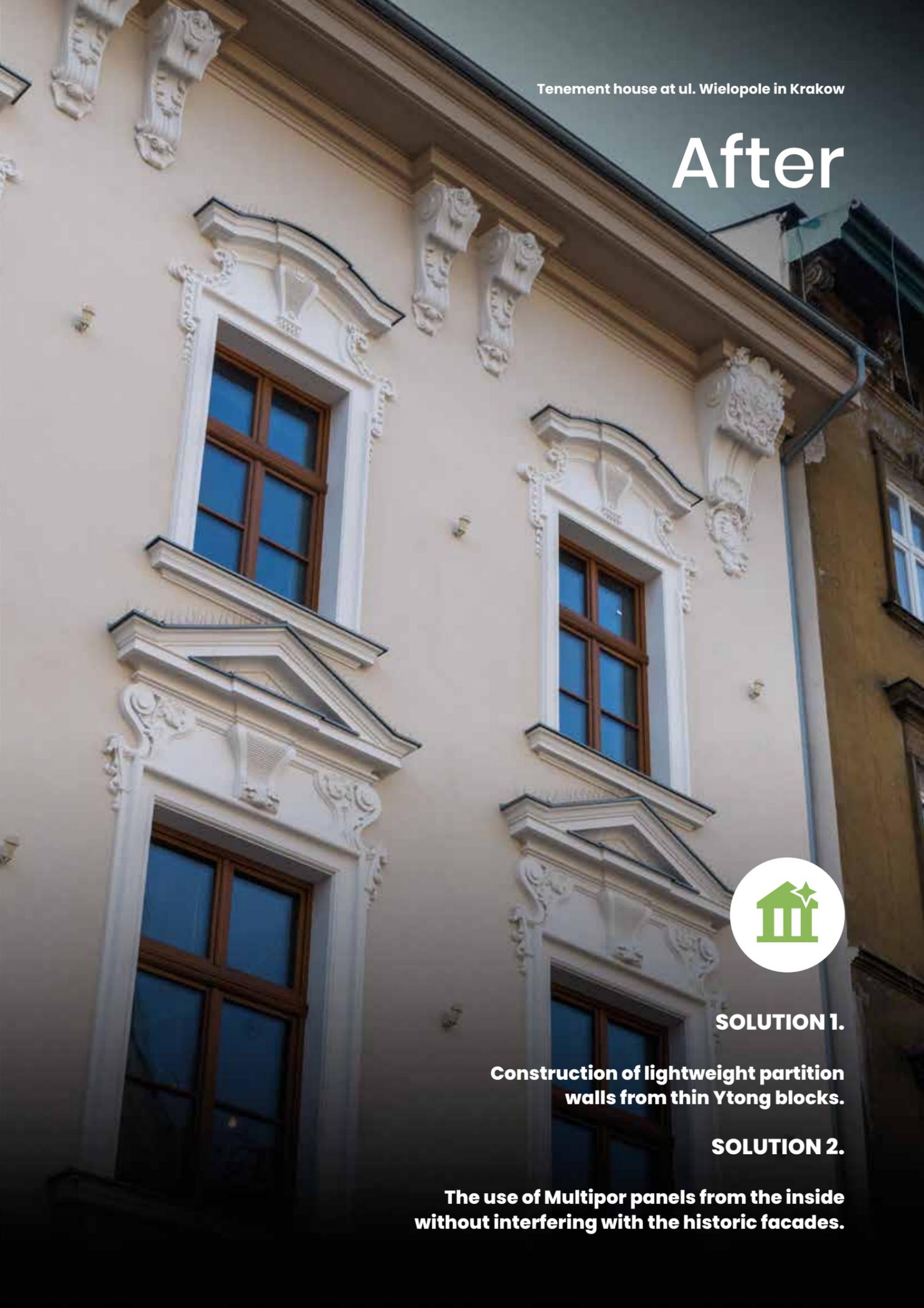
CHALLENGE 1.

Changing the layout of the rooms without overloading the existing structure.

CHALLENGE 2.

Adaptation of the historic walls of the tenement house to modern thermal standards.

After



SOLUTION 1.

Construction of lightweight partition walls from thin Ytong blocks.

SOLUTION 2.

The use of Multipor panels from the inside without interfering with the historic facades.

Before



CHALLENGE 1.

Reduction of heating costs of a large palace adapted for public purposes.

CHALLENGE 2.

Thermal insulation of polygonal towers, including the space around arched windows.

After



SOLUTION 1.

Thermal modernization with Multipor panels – improvement of the building's energy balance and reduction of heating costs.

SOLUTION 2.

Easy adjustment of the thermal modernization layer made of Multipor boards to the partitions of complicated geometry.

Before



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Silvertops in Antwerp

Before



CHALLENGE

Improve moisture conditions and insulation of the façade.

Silvertops in Antwerp

After



SOLUTION

state of the art façade which results in abandoning moisture problems and better insulation performance.

European Autoclaved Aerated Concrete Association

The European Autoclaved Aerated Concrete Association (EAACA) was founded in 1988. Our mission is to promote the interests of AAC producers across Europe and showcase the benefits of AAC as a unique construction material, including strength, stability and lightweight, usage flexibility, transport efficiency as well as sustainability and full recyclability.





European
Autoclaved
Aerated
Concrete
Association

Stay up to date with the latest information on AAC's contribution to strengthening the Renovation Wave.

Scan the graphic code below and learn more.



EAACA

Hohes Steinfeld 1
14797 Kloster Lehnin
GERMANY

T: +49 (0) 3382 7060 112
E: info@eaaca.org
www.eaaca.org