

# A building inspired by nature



**Scenic surroundings and student life go hand in hand in Lyngby, Denmark. Known as BaseCamp, this award-winning student accommodation complex is designed to create a sense of community while fitting in perfectly with its green surroundings.**

BaseCamp brings student accommodation to a whole new level. With its' organic shape and varying heights, the complex almost melts into the surrounding nature.



## At a glance:

Innovative, stone wool-based products helped an equally innovative, new living space scoop the prestigious 'Building Project of the Year' award in Denmark.



**Aesthetics**



**Fire safety**



**Energy efficiency**

## THE CHALLENGE

Nature was the main source of inspiration for BaseCamp, but at the same time, it also posed a challenge. When designing the complex, Lars Gitz Architects set out to create a campus that truly respected the surrounding nature. Considering that the space would also home a wide variety of people, from students to senior citizens to visiting business people, the safety and comfort of those living there was also of high priority.

## THE SOLUTION

BaseCamp consists of 639 studios for students, 48 studios for seniors, 99 corporate apartments and a circular communal building in the centre.

**99** *Based on the vision of creating a building that intertwines with nature, the forms are inspired by nature. The construction is therefore neither straight nor symmetrical, it is organic and twisted in shape - just like nature is,"* says Jon Clausen, architect MAA and partner at Lars Gitz Architects.

The project, which has won several architecture awards including the prestigious Building Project of the Year in Denmark, also captured nature within the façade of the building. This was achieved by installing the ventilated REDAir Flex façade system from ROCKWOOL and using façade panels from Rockpanel Woods.

**99** *BaseCamp achieved the prestigious Gold certificate from the international green building certification scheme, DGNB, which confirms a very high level of sustainability throughout every phase of the building. The choice of insulation contributes to*

*the achievement of this high sustainability recognition for the building,"* explains Nina Dencker Nielsen, Business Director for Denmark, ROCKWOOL Nordics.

Besides the REDAir façade system, ROCKWOOL delivered flat roof insulation solutions for the circular communal building at the centre of the space, and special roof solutions and fire belts for the functional roof terraces to prevent fire from spreading. ROCKWOOL was also chosen to provide the fire preventing insulation for the ventilation system.

## The benefits offered by ventilated façades

A ventilated façade system as a whole protects against adverse weather conditions. As the façade is generally the largest surface area of a building, it's important to consider the relationship between the internal and external environment – and properly insulate the façade to improve heat regulation. ROCKWOOL's ventilated façade technology offers buildings thermal benefits, low u-values, fire resistance and acoustic protection from the outside world.

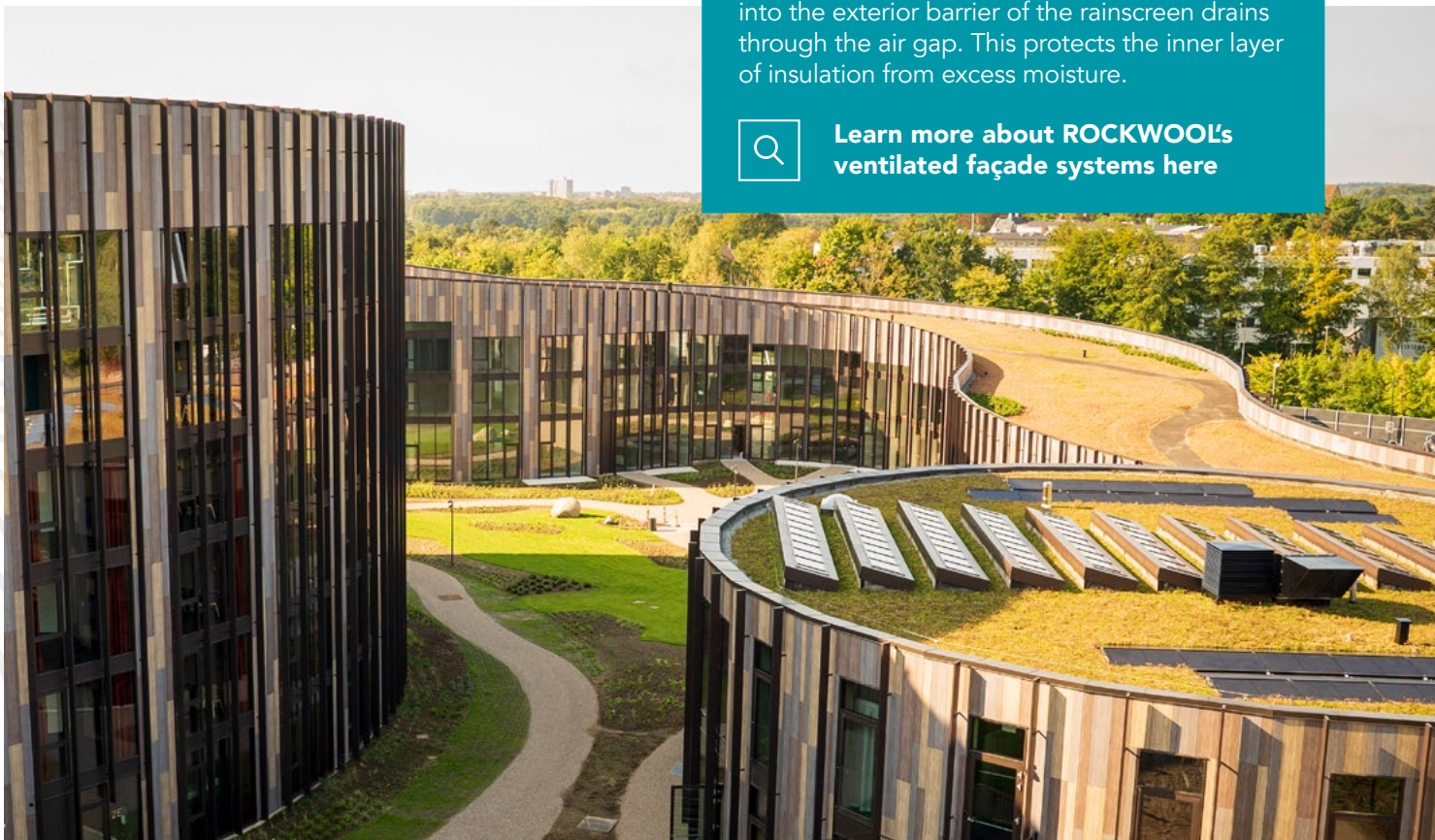
Among other benefits, such systems also help to prevent:

- Water damage
- Risk of mould
- Thermal bridges
- Structural damage

With 'open-joint' solutions, rainwater that gets into the exterior barrier of the rainscreen drains through the air gap. This protects the inner layer of insulation from excess moisture.



**Learn more about ROCKWOOL's ventilated façade systems here**





### Naturally energy efficient, naturally beautiful

The REDAir Flex façade system based on stone wool proved to be an excellent choice to help ensure that the space stays energy efficient, has a great indoor climate with no thermal bridges and is fire safe. Not only that, the system is also a joy to work with, which was highly appreciated by the construction team.

“It’s really easy to work with the REDAir Flex façade system. It is quick to adapt and install, even when building curved facades with up to a 15 degree rounding. With REDAir Flex and Rockpanel, it’s no problem,” says Casper Andersen, chairman of the carpentry company Lund & Refsgaard, who were responsible for the façade contract.

The self-supporting façade system was combined with exterior façade cladding from Rockpanel. For BaseCamp, three different types of Rockpanel Woods were used; Carbon Oak, Ceramic Oak and Rhinestone Oak. The façade panels look just like beautiful wood, but consist of stone fibres.



“The façade panels from Rockpanel make it possible to play with different wood designs. Again to reflect nature, we have gone for a random look, for which a combination of different wood colours was chosen,” says Jon Clausen. “The surface of the boards is reminiscent of wood, and as it looks so much like real timber, it really provides that same warmth and organic touch. At the same time, the Rockpanel boards have been chosen because they deliver the desired expression within an economically realistic framework.”

The boards are also treated with a surface coating that makes them robust and facilitates low maintenance. Allan Lindboe, Business Manager at Rockpanel, explains: “Graffiti can be cleaned off, and algae does not settle on the boards. The boards are treated with ProtectPlus, which makes them effectively self-cleaning and brings the need for maintenance to a minimum.”

### Rockpanel Woods

A new way to give your building a natural and harmonious look, boards from Rockpanel Woods are manufactured through a careful and innovative production process to look just like real wood.

This product combines the properties of wood and stone to create a unique panel that offers the authentic look and workability of wood with the durability, robustness and fire resilience of stone. The boards are sustainable and very low-maintenance, with a gorgeous wood look that doesn’t rot or burn.



[Learn more about Rockpanel Woods](#)



### A rooftop worth visiting

Rising to an altitude of 22 metres, a vast, green roof spans 8,000 m<sup>2</sup>. The roof is truly one of the highlights of the space, combining stunning views of the surrounding nature, attractive roof terraces, herb gardens to attract birds, bees and budding chefs and a long running path. Stone wool insulation from ROCKWOOL was installed in belts throughout the green roof to keep the structure fire safe.

For the circular communal building in the middle of BaseCamp, ROCKWOOL's sturdy TopRock solution was chosen to ensure high density and hard insulation, and to provide both an energy efficient insulation layer and also a functional roof top to become the foundation for energy producing solar panels.

### Embracing circularity

ROCKWOOL has a sharp focus on the environment and sustainability, with a circular approach to production, disposal and recycling leftover product, so there are many environmental benefits when builders choose stone wool products from ROCKWOOL.

*“We can recycle all stone wool insulation from construction in Denmark. Therefore, we assist contractors with collecting leftovers and waste cuttings from the construction site, and afterwards recycle the materials into new insulation products,”* explains Nina Dencker Nielsen, Business Director for Denmark, ROCKWOOL Nordics.

This is a significant advantage, and one that Casper Andersen, from Lund & Refsgaard, can certainly agree with.

*“Normally we collect and bring leftovers to the public recycling site, and in large projects such as BaseCamp, it becomes a lot. When ROCKWOOL offers a recycling service, we save additional time and costs,”* he says.

### Flat roof and terrace insulation

As heat rises, most energy loss is usually through the roofing area. Flat roof insulation is an effective way to enhance the energy efficiency of a building and reduce heating costs.

As with BaseCamp, constructions such as terraces, rooftop gardens and solar panels increase the demand for a robust and effectively insulated roof, helping to enrich the space available on top of your building.



**Understand the benefits of flat roof insulation**

## It's time to build a better future

Reducing greenhouse gas emissions is a team effort, with governments, companies and citizens all doing their part. A lot has been achieved up until now, but there is a long way to go and we need to speed up the process. Even companies who are in the energy saving business must do more.

ROCKWOOL is a net carbon negative company, with our stone wool insulation saving 100 times the energy consumed and CO<sub>2</sub> emitted in its production. Our other stone wool products support sustainable modern living within water management, sound insulation and growing solutions for vegetables. Stone wool is circular by nature and can be fully recycled indefinitely with no loss of performance. Still, it takes energy to save energy, and we are committed to do more.

That's why ROCKWOOL has signed up to the Science Based Targets initiative (SBTi) and committed to a verified and approved plan for an ambitious one-third reduction of our lifecycle greenhouse gas emissions within 15 years using 2019 as the baseline. This includes a reduction of our factories' absolute emissions by 38 percent and our non-factory, absolute lifecycle greenhouse gas emissions by 20 percent. The SBTi is a partnership between CDP, United Nations Global Compact, World Resources Institute, and World Wide Fund for Nature (WWF), and has been created to drive ambitious climate action in the private sector by mobilising companies to set science-based reduction targets.



**Learn more about how we're taking energy saving further here**

### ROCKWOOL deliveries to BaseCamp:

- 12,000 m<sup>2</sup> Rockpanel Woods.
- Almost 11,000 m<sup>2</sup> RedAir Flex ventilated facade system. The façade contractor was Lund & Refsgaard Aps, a carpentry company from Holstebro, Jutland in Denmark.
- Almost 1,200 m<sup>2</sup> flat roof insulation TopRock og TopRock Terrace plus fire belts. The roofing contract was conducted by MultiTag Enterprise.
- Fire safety insulation of the ventilation system: CONLIT Fire mat made of non-combustible, moisture and water repellent stone wool. The product is specifically designed to provide maximum fire protection of ventilation ducts.
- Continuous product training of construction workers on site.
- Recycling: Waste is reduced by taking left over stone wool and cut-offs back to ROCKWOOL's production where it is recycled in to new high performing insulation solutions.



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