

# By Nature in action.

A case study collection.

**BY  
NATURE.**





# Our choices matter, also for building materials

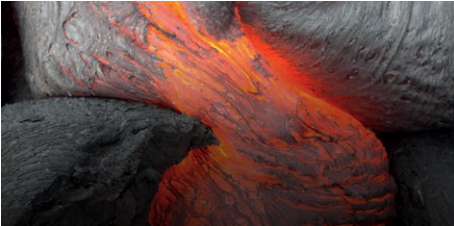


**Fire safe. Circular. Durable. Moisture resistant. Sound absorbent. Breathable.**

These are the natural properties found in all ROCKWOOL stone wool insulation.

Our products make buildings more energy efficient, safer from fire, healthier, and more comfortable to be in. And since your choice of building materials today shouldn't negatively impact tomorrow, we take care of that too.

Whatever happens to the building in its next phase of life, our natural insulation products can easily be reused or recycled and pose no risk of negative health or environmental impacts for future generations.

Not all building materials are created equal. Ours are created **by nature**.

 <p><b>FIRE SAFE</b> ROCKWOOL stone wool insulation can withstand temperatures of over 1,000°C and can help stop the spread of fire, keeping your family safe.</p>	 <p><b>CIRCULAR</b> ROCKWOOL stone wool can be removed and recycled into new stone wool again and again, without ever losing performance.</p>	 <p><b>DURABLE</b> ROCKWOOL stone wool insulation lasts for at least 55 years! It's unaffected by weather, humidity and temperature changes – and needs no maintenance.</p>
 <p><b>MOISTURE RESISTANT</b> ROCKWOOL stone wool insulation resists water and moisture, protecting the long-term health of buildings and the people within them.</p>	 <p><b>BREATHABLE</b> ROCKWOOL stone wool insulation creates healthy and comfortable indoor environments. Its breathability also prevents the growth of mould and mildew.</p>	 <p><b>SOUND ABSORBENT</b> ROCKWOOL stone wool insulation is excellent at reducing and absorbing sound, and can make even the noisiest infrastructures seem quieter.</p>



**High-rise trio shimmer safely in the South London sun**



**Creating an overall sustainable construction**



**Building a temperature-controlled storage space to last**



**Stone wool insulation versus exposure to the elements**



**Breathing new life into old neighbourhoods**



**Texas style meets sustainable architecture from Denmark**





FIRE SAFE  
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# High-rise trio shimmer safely in the South London sun

## THE CHALLENGE

Constructed during the 1960s as part of a larger housing project called Tustin Estate, three 20 storey apartment blocks needed complete renovations to replace combustible building material on their structures and improve the living conditions of residents. The buildings had several serious issues, resulting in condensation, drafts and heat loss which affected the health and wellbeing of those living there.

The property owners, Southwark Council, engaged Engie Regeneration as the design and build contractor, who in turn appointed architects and surveyors, Blakeney Leigh, to initiate and lead the £35 million development.

The three apartment blocks contain 204 homes, with some 480 people living there.

## THE SOLUTION

As a first step, the project team behind the renovation consulted with residents and other stakeholders to establish a feasibility programme in order to explore design options and decide on the best solution to upgrade the three buildings.

Since December 2018, fire regulations in the UK demand that the external walls of buildings rising over 18 metres should only contain components that meet or exceed EN13501 Class A2-s1,d0. These regulations further cemented that fact that the ideal option to upgrade the buildings was a combination of Rockpanel external cladding with a ROCKWOOL insulation system.



## Securing community confidence in the project

Families living within the three apartment blocks at Tustin Estate were focused on improving fire safety as an important aspect of the renovation. For that reason, meaningful engagement and transparency were very important. The resident's association was invited to be part of the project. They were able to review examples of the proposed materials and visit an on-site space where they could view samples and learn about the fire properties of the proposed materials. A pilot phase was also run where these systems were installed at a selection of flats to further instil confidence in the renovation.

*"Due to the fact that the residents would be living in their homes throughout the renovations, communication was key. The main contractor, Engie Regeneration, and everyone involved in the construction process worked hard to maintain good rapport and ensure each step of the process was understood by those it concerned the most,"*

explains the project's architects, Blakeney Leigh. *"The installers, Rayell, received very positive reports on their day-to-day interaction with residents. We were particularly impressed with the colour changing qualities of Rockpanel Chameleon and there was great support and engagement from the Rockpanel team."*

Tustin Estate resident's committee member, Andy Eke, was also very positive about the project, *"The consultation process was very democratic. Regular meetings were held to discuss the plans and progress with due diligence given to every aspect of the materials and installation. Rockpanel presented a video which explained how the new cladding would work and how it would alleviate the issues we had experienced and ensure fire safety. We are very pleased with the results and know surrounding residents are envious, with some assuming the three blocks are complete new builds."*





## Fire safe by nature

Both Rockpanel innovative façade panels and RAINSCREEN DUO SLAB® are based on stone wool. Naturally fire resilient, they meet the strictest requirements for structural fire safety and offer optimum protection for people – and with no added chemical flame retardants needed, they are also kind to the environment. Capable of withstanding temperatures of over 1000 C, the stone wool within the panels helps contain fire and prevent its spread. At the same time, it does

not contribute to the emission of significant quantities of toxic smoke. From apartment blocks to skyscrapers, from industrial facilities to schools and hospitals, the natural qualities of stone help us build sustainable and safe cities, full of fire safe buildings.

With the technical and functional requirements already naturally built-in to Rockpanel façade boards, architects enjoy complete design freedom.

## Fire resilient stone wool insulation

RAINSCREEN DUO SLAB® is a stone wool insulation product specifically developed for use within ventilated cladding systems as well as sealed systems such as curtain walling, and these stone wool slabs played an important part in the Tustin Estate renovation. A variety of different thicknesses were used, but the predominant slab used was 120mm.

RAINSCREEN DUO SLAB was used to fulfil a number of purposes throughout the renovation, such as:

- Vertical firebreaks - SP120
- Window reveal locations
- Part-wall locations
- End of cladding zone locations
- Compartmentalisation of locations such as closing off balconies and penthouse terraces.

Manufactured using Dual Density technology, the outer surface of each slab features a distinctly higher density than the underside. This provides a firm and robust surface for the application of fixings, while the resilient underside can accommodate unevenness in the substrate. RAINSCREEN DUO SLAB brought all the unique and natural benefits of stone wool to the renovation, and proved to be the perfect partner for Rockpanel Chameleon façade panels.

## A chameleon-like approach

At the end of this process, the residents were given the final decision on the colours and finishes to be used on each block. They chose gloss Rockpanel Chameleon in particular hues for the southern façade of each block: purple/green/blue for Ambleside Point; red/gold/brown for Grasmere Point, and light purple/light brown for Windemere Point. The existing faces on each block use RAL 7035 light grey with balconies specified in RAL 7039 grey. In total, more than sixteen thousand square metres of rivet-fixed facades are installed across the three blocks.

A2 Rockpanel Chameleon has a unique appearance which reflects in such way that, depending on the angle light hits its surface and the point of view, a changing spectrum of colour tones are visible. Due to an innovative and unique crystal effect layer, Chameleon transforms any building into an eye-catching structure that is constantly transforming.

*"This was a challenging but very rewarding re-clad. We worked closely with everyone involved on-site and interacted with residents so that everyone was kept informed. Rob Shirville and the Rockpanel team offered expert guidance and made sure the correct materials were delivered at the right time," says Ray Ellingford, from the project's installers, Rayell. "All concerned are very satisfied with the completed renovations and we are looking forward to embarking on similar projects very soon."*





### Project data:

- **Project:** Tustin Estate
- **Location:** London, United Kingdom
- **Owner:** Southwark Council
- **Architecture:** Blakeney Leigh
- **Contractor:** Engie Regeneration
- **Products:** Rockpanel Chameleon, Rockpanel Colours (RAL 7035) and RAINSCREEN DUO SLAB





CIRCULAR  
**BY**  
**NATURE.**

# Creating an overall sustainable construction

Frode Laursen built a new logistics centre in Sweden – and stone wool played an important role in ensuring it is the most sustainable construction possible.

## THE CHALLENGE

A logistics centre of 39,000 m<sup>2</sup> was recently established in Eskilstuna, central Sweden. Sustainability was a key requirement for Frode Laursen, the Danish transport company developing the centre. With an aim to reduce the environmental impact of the plant both during the construction phase and during operations, the energy-efficient and recyclable solutions of ROCKWOOL were the ideal choice – particularly considering that the production of the stone wool insulation recently became more climate-friendly.

## THE SOLUTION

The purpose of the large, modern facility is to serve as a central hub to facilitate food trade throughout the Nordic region. The logistics centre was built according to Frode Laursen's Green Warehouse Vision, which included a strong focus on CO<sub>2</sub>-friendly building materials during the construction phases, and securing water and heat recovery and 100 percent green electricity during operations. The facility includes both the warehouse and logistics areas, an administrative building and a wash lane for trucks. Throughout the entire facility, all domestic water is recycled.



## **Saving energy, water – and even more**

*“Our ambitions are strongly aimed at reducing environmental impact both during construction and operations. Our approach is best described with the motto ‘the greenest energy is the energy not used’. Therefore, during the entire project, we considered which solutions could save energy, water and other resources in the future use of the building.”* says Jakob Gundal Nikolajsen, building manager at Frode Laursen. *“We have been working closely with ROCKWOOL for many years. The transition to fossil-free energy sources in the Nordic factories ensures a more sustainable production of stone wool, which is well suited for our purpose, because we constantly pursue sustainability principles in our construction.”*

## **Increasing fire protection – while staying circular**

For the project, ROCKWOOL supplied stone wool insulation for the roofs, walls and façade, with the natural attributes of stone wool increasing fire protection and ensuring a stable construction. A total of 16,000 m<sup>2</sup> of sandwich panels were specified for the exterior walls, all containing stone wool at the core with a fire classification rating of Euroclass A2-s1,d0 according to EN 13501-1. ROCKWOOL stone wool also fits perfectly with Frode Laursen’s sustainable construction goals, as it is a truly circular material that can be recycled infinitely without losing performance.





## Circular by nature

Based on one of the most abundant raw materials on the planet, ROCKWOOL stone wool is circular by nature. Although stone is in plentiful supply, it's still important to make better use of natural resources – especially when it comes to the building sector that produces a third of all waste, much of which ends up in landfill today.

ROCKWOOL stone wool is recyclable and long-lasting, even using waste from other industries as an alternative raw material. Stone wool products can be easily removed when a building is renovated or demolished, and recycled back into new products – without ever losing performance. This is an important element of a “circular” business model – and one of the main reasons stone wool features so prominently throughout Frode Laursen’s new facility.

## One system, many advantages

The administration building itself was built using ROCKWOOL’s complete wall system, Rockzero. It is an efficient system of load-bearing walls, which ensures rapid and simplified assembly, maximum utilisation of square metres and a construction free from thermal bridges.

*“The Rockzero system is a diffusion-open construction that is breathable and offers both a significantly better room climate as well as better acoustics. The improved indoor climate will benefit the people working in the building. In addition, Rockzero is a fireproof solution, and the entire construction is primarily inorganic, which means that moisture and mould do not occur,”* says Jakob Sjø, project sales manager at ROCKWOOL Nordics.

On top of advantages such as ease of mounting and thinner walls which help achieve more net square meters, the Rockzero system also has a high insulation value. This secures savings in energy consumption and reductions in operating costs – and using less energy also always means reducing associated emissions.

## Focusing on a greener future

In 2020, Frode Laursen was recognised as Transport Company of the Year in Denmark for its green transformation. The construction of its large, modern logistics centre demonstrates perfectly why the company was a fitting winner and how sustainability truly is considered at every level. The new logistics centre operates using 100 percent renewable energy, intelligent energy monitoring and controlled LED lighting for low energy consumption as well as rainwater and heat recovery.

*“With such a large project, it is exciting to take innovative products and use them to create an overall sustainable construction that solves some of the challenges we know we will encounter in the future in terms of environment and nature,”* says Jakob Sjø. *“The close dialogue with both the client and the contractor building with the Rockzero system has made it possible for us to find a perfect solution which also meets the high environmental requirements. It has been a good and exciting collaboration across the board.”*





**Frode Larsen's new logistics centre was completed in April, 2022.**

**Construction facts:**

- Construction period: 2021–2022
- Area / square metres (m<sup>2</sup>): 39,000
- Client: Frode Laursen

**Products:**

- Rockzero
- Hardrock
- Insulation in sandwich panels (Spanrock M)
- Rockpanel façade solution

**Services:**

- RockCycle® – ROCKWOOL recycling scheme for recycling stone wool





DURABLE  
**BY**  
NATURE.

# Building a temperature-controlled storage space to last

**Stone wool insulated sandwich panels helped secure the ideal storage facility for Ferrero.**

Of Italian origin and founded after the Second World War, the Ferrero Group established one of its major production sites in Normandy, France at the end of the 1950s, to the north of Rouen and on the edge of the Boucles-de-la-Seine Regional Natural Park. The popularity of its confectionary products led to worldwide growth and expansion. Its first French site, in the town of Villers-Écalles, now exports 33 percent of its output across Europe and serves as the location of the production plant for one of the Group's flagship products: Nutella.



## THE CHALLENGE

Ferrero Group wanted to build a new automated warehouse on its historic site in France. As the plot is located in the catchment basin of the Austreberthe and Saffimbec rivers, the development needed to adhere to the flood risk prevention plan in place. Nearby residential dwellings meant that the noise level generated by the facility also needed to be considered, with a maximum of 30 trucks permitted to visit per day. In fact, the neighbouring houses and the physical nature of the area meant that environmental integration was one of the requirements when constructing the new building, and a moderate visual impact needed to be achieved. The new structure should be durable by nature, and require minimal maintenance to avoid further renovation and building in the future.



## THE SOLUTION

Ferrero's automated warehouse incorporates a temperature-controlled storage unit, a traditional despatch building and plant room, as well as offices and social facilities spread over two floors. Resilient fire walls separate each section of the building, with differing construction methods used for each. The storage unit is constructed using metal, whereas the other two spaces are built using concrete. To ensure true durability and weather resistance, the entire structure is covered by steel panels that include stone wool insulation.

The most important part of the project, the storage unit, rises to nearly 35 metres in height. It contains 18,500 pallet locations served by fully automated rack operating devices where only maintenance personnel are required to enter. Connected at roof level by open-web joists, the building's self-supporting structure is part of the scaffolding in which the storage racks are inserted – and to which the flat sandwich panels that enclose the building are fastened.

More than 10,000 m<sup>2</sup> of sandwich panels cover the structure. Ranging from 80 to 200 millimetres in thickness, they combine the natural benefits of stone wool with a painted galvanised steel sheet skin. These sandwich panels provide the insulation that is essential for the maturation of Ferrero's products as well as securing their safe storage. They also help to stabilise three different temperatures within the space:

- 17°C and 9°C, combined with controlled humidity, to preserve and stabilise the finished products;
- 20°C within the packaging warehouse.



## Durable by nature

ROCKWOOL stone wool is durable by nature. Its thermal performance is unaffected by weather, humidity, temperature changes or compression – and needs no technical supervision or maintenance throughout the building's lifetime. It is also resistant to both corrosion and mould.

Sample testing from existing buildings shows that ROCKWOOL stone wool retains its performance for 55 years – and counting! As its thermal performance remains constant over time, just imagine how much energy can be saved throughout the lifetime of the building.

## A moderate visual impact

The external façade, consisting of rectangular sandwich panels arranged vertically to achieve an almost pixelated look, has an aim to minimise the impact the large storage space has on the surrounding area. The lower rectangles are grey in colour, with those higher up on the façade fading to white.

*“The initial idea was that the upper part of the building would be toned down in order to mitigate its effect,”* explains architect Bernard Gaud, a partner at AFA practice, the project's architects. *“The chocolate colour initially chosen was ultimately abandoned in favour of a more neutral grey.”*

Stone wool insulated sandwich panels used throughout building:

- 820 m<sup>2</sup> of Vulcastell Wall FC 80 mm
- 9,550 m<sup>2</sup> of Vulcastell Wall FC 120 mm, EI 60 fire resistance
- 510 m<sup>2</sup> of Vulcastell Wall FC 200 mm, EI 180 fire resistance
- All were produced using ROCKWOOL stone wool insulation.







**Project data:**

**Client:** Ferrero

**Project manager:** AFA Architects (core mission)

**Consulting Engineer:** Artelia Bâtiment et industrie

**Contractors:** Eiffage (main); Face (assembly)

**Sandwich panel supplier:** Joris Ide

**Main contractor:** Eiffage Construction

**Sandwich panel installation contractor:** Face

**Surface area:** 6,430 m<sup>2</sup> floor area

**Timescale:** 2016-2019





MOISTURE  
RESISTANT  
**BY**  
**NATURE.**

# Stone wool insulation versus exposure to the elements

During construction, its insulation was really put to the test, proving that stone wool truly is moisture resistant by nature.



## THE CHALLENGE

Standing at a lofty 23 stories, Beckley Point is renowned for being the tallest building in Plymouth. The aim of this building was to provide state-of-the-art student residences for Plymouth's large student population. Located at the very heart of the city centre, a mere stone's throw from both the University of Plymouth and the Plymouth College of Art, Beckley Point student residence couldn't be more convenient for those attending either educational institution. All the colour and conveniences of the city are within strolling distance and the main train station is just a few hundred metres away.

Costing £30.79 million to construct, the 505-bed student residence was built to last and to secure a comfortable indoor environment for the students. The project used RAINSCREEN DUO SLAB®, a stone wool insulation product specifically developed for use within ventilated cladding systems, as well as sealed systems such as curtain walling. Not only does the insulation product offer exceptional thermal properties to keep the students cosy and warm, RAINSCREEN DUO SLAB has proven acoustic benefits to keep out the noise of the city and create an atmosphere conducive to study. Importantly, the insulation is classified as Euroclass A1 non-combustible, vital for the safety of high-rise structures. Although RAINSCREEN DUO SLAB had been specified from the outset, the fire tragedy at Grenfell Tower in June 2017 led to a review of the planned outer cladding panels during the project at Beckley Point. While assessing how to proceed, the façade contractor went into liquidation, causing the construction to be delayed for almost a year.

## THE SOLUTION

RAINSCREEN DUO SLAB had already been installed on most of the building's façade and was left exposed for almost a year. The resilience and natural moisture resistant properties of the stone wool insulation meant that once it was dried, it could be covered with the selected cladding and perform just as it would have done without the delay and exposure. Students were even able to move in and occupy the building before the cladding was installed.

So although the construction project proved to be an incredibly difficult one, experiencing lengthy delays outside of anyone's control, the stability, strength and moisture resistance of stone wool insulation withstood an unplanned test against the elements.





## Moisture resistant by nature

Stone wool helps play an active role in protecting buildings from rainfall and humidity. When it comes to handling moisture, stone wool resists water by nature, just like the stone it's formed of. During wet and rainy weather, stone wool insulation keeps buildings warm and dry without any reduction in thermal performance over time. It also resists moisture in humid climates, protecting the long-term health of buildings and the people within them.

Although ROCKWOOL stone wool is water resistant by nature, it can be engineered to do the exactly opposite; to absorb water. The resulting products can meet a range of modern challenges, including helping farmers grow fresh produce using 75 percent less water and reducing the impacts of heavy rain in urban areas.

## Love it...or hate it

Shortly after its opening, Beckley Point was shortlisted for the infamous Carbuncle Cup in 2018, an annual award for Britain's most grotesque new building.

Beckley Point did not emerge as winners of the award, to the relief of many locals who believe it is a welcome addition to downtown Plymouth. Eyesore for some, contemporary delight for others, one thing is certain – the stone wool insulation will continue to work effectively for the next 55 years or more.







**Project data:**

**Client:** Beckley Point

**Year:** 2017

**Building Type:** Student accommodation

**Application:** Rainscreen insulation

**Product type:** RAINSCREEN DUO SLAB: 4000 sqm





BREATHABLE  
**BY**  
**NATURE.**

# Breathing new life into old neighbourhoods

How the natural properties of stone wool is bringing new comfort to entire neighbourhoods in Pamplona, Spain.



## THE CHALLENGE

In several areas around Pamplona, Spain, a largescale renovation programme is slashing the energy costs and emissions of hundreds of existing buildings and improving the indoor environments for countless families.

70 percent of the buildings in the Txantrea neighbourhood in Pamplona, Spain were built during the 1980s, making age-related energy loss a common issue in many homes. The problem was brought to the attention of the government of Navarre, resulting in the creation of the Efidistrict project. With an aim of improving energy efficiency by renovating the ageing buildings, the project also served to promote similar transformations in other municipalities of Navarre. And when stone wool insulation is used to combat the energy loss, the buildings benefit from its unique benefits and the indoor environment is also instantly upgraded.

## THE SOLUTION

The impact of this large-scale renovation effort in Pamplona is unmistakable. Once rundown, the 23 public housing buildings – all of them between 40 and 70 years old – glisten like new. But for the residents of almost 600 homes, the improvements run far deeper than the attractive new façades. A new thermal envelope that includes 10 cm of ROCKWOOL external façade insulation has significantly lowered energy consumption and costs, improved acoustic comfort inside, and upgraded the indoor environment to benefit the health and wellbeing of all those who live there.

In addition to taking steps to dramatically reduce energy consumption, the use of fossil fuels have been replaced with renewable energy sources such as biomass.





## Breathable by nature

As well as maintaining the optimal temperature, ROCKWOOL stone wool insulation is breathable by nature. So architects can create buildings that not only shelter us from the weather, but also provide a safe and comfortable indoor environment that empowers us to lead healthy lives.

The breathable nature of stone wool insulation also contributes to securing healthy, comfortable indoor environments that are cool in the summer and warm in the winter. But that's not all. Buildings, like people, need to stay healthy. Stone wool is vapour-permeable, which means it allows moisture to pass through walls and out of the building. This protects buildings against rot, mould and humidity damage.

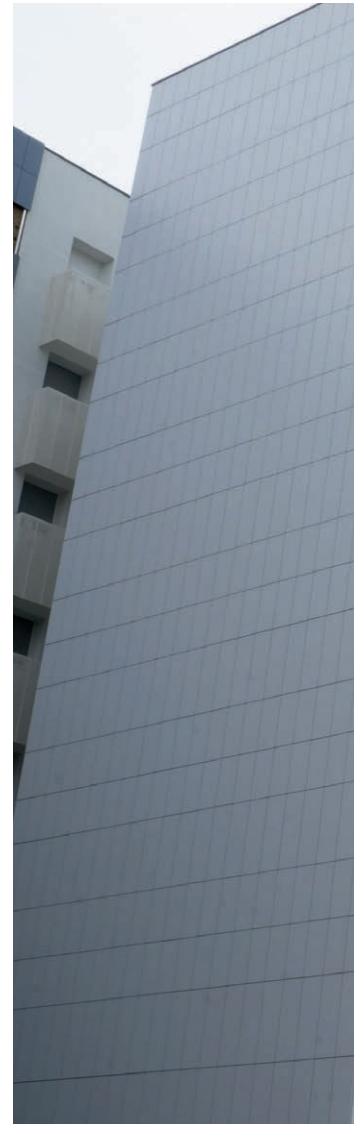
## Living more energy consciously

Improving the thermal insulation in the façade and roofs is just one aspect of the project. Another important task has been helping residents to understand how insulation works and to encourage energy efficient behaviour at home. In fact, involving the residents throughout the project has been a vital to its success. Over 800 meetings were held within the community, resolving more than 1,900 questions from concerned or curious locals. This level of interaction with those directly impacted by the changes resulted in high levels of acceptance and enthusiasm for the project.

## A project to be proud of

The project has turned these buildings – once some of Spain's least energy efficient – into some of Spain's best energy performers. Started in 2015, the Efidistrict project is now in its third phase with renovation planned or underway on more than 1,000 additional homes in social housing buildings in other neighbourhoods around Pamplona-Iruna.

The success of Efidistrict has been recognised inside and outside of Spain as a reference case for other municipalities seeking to combine largescale renovation with urban regeneration. The results are tangible, and the approach – including close cooperation with the community to ensure open communication during the renovation – has led to minimal disruption to the lives of residents.







## Project data:

**Year:** 2014-2020

**Building type:** Comprehensive energy rehabilitation of the Txantrea neighborhood

**Application:** ETICS, ventilated façade

**Product used:** Ventirock Duo, Rocksate Duo Plus, REDArt System

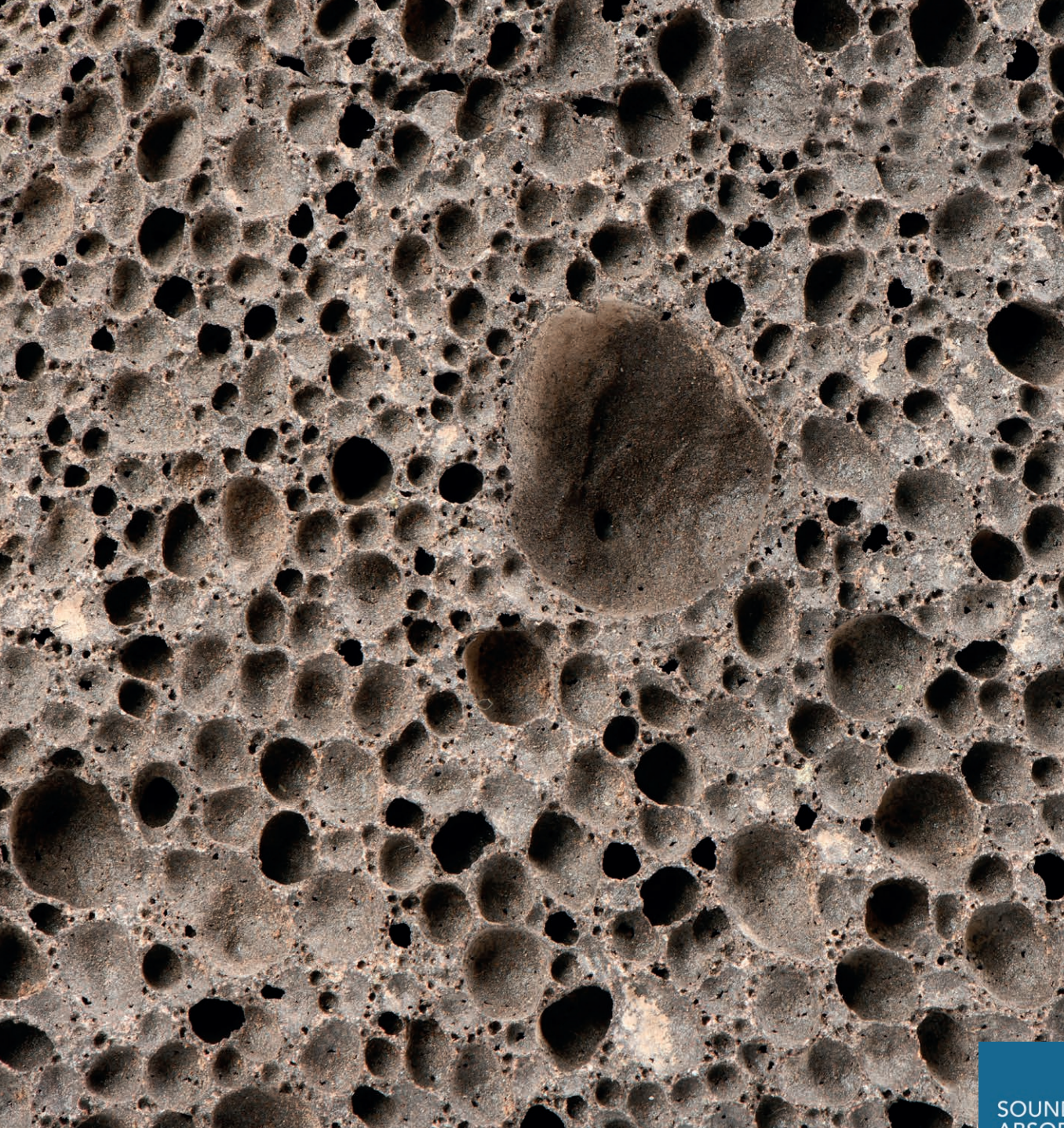
## Understanding the Efidistrict project

The purpose of the Efidistrict Fwd project is to carry out deep energy retrofits throughout the Txantrea district of Pamplona. This is to be achieved by developing and implementing energy saving measures for buildings and through powering the district heating systems using renewable energy sources. Since the beginning of the project, the Government of Navarra has invested EUR 44 million in the renovation and regeneration of residential buildings in the Txantrea neighbourhood with impressive results so far.

The overall project aim is to improve the quality of life of those living in the district by:

- Reducing energy costs, in particular those associated with heating and warming water
- Using clean energy
- Deep energy retrofit of buildings, resulting in better indoor environments
- Improving the existing district heating systems
- Renewing the urban environments





SOUND  
ABSORBENT  
**BY**  
**NATURE.**

# Texas style meets sustainable architecture from Denmark

Grundfos chose Rockfon to support the acoustic and aesthetic goals for their new facility in Texas – and achieved LEED Platinum certification.



## THE CHALLENGE

Making conscious construction choices was top of mind for Grundfos when planning its Global Water Utility Headquarters in Brookshire, Texas. The Danish water solution company wanted to demonstrate its commitment to sustainability at a global and local level when developing the 45,000-square-foot facility. Meeting LEED Platinum certification involves meeting a wide range of criteria to secure healthy, efficient and environmentally responsible buildings. But for Grundfos, it was also about creating a comfortable space for 100+ employees – one conducive to collaboration combined with the ability to concentrate.

“We wanted the design to be a culmination of Danish architecture and Texas style. Sleek, modern and simplistic,” says Michael Franzen, Senior Regional Manager for Facilities and Machining at Grundfos Global Water Utility Headquarters. “Acoustics were a key consideration, because of the open concept and design. We ended up with large open areas that don’t feel or sound acoustically empty.”

## THE SOLUTION

In order to earn LEED Platinum certification, locally sourced and environmentally responsible building materials were verified for the building’s construction and interior build-out. Helping with the ceiling product selection, Rockfon provided HPDs, EPDs and sound-absorbing stone wool ceiling systems with an NRC of 0.95. Rockfon, as part of the ROCKWOOL Group, and Grundfos both share a commitment to the UN Sustainable Development Goals. It is not all they share – both companies’ global operations are based in Denmark.





## Meeting LEED acoustic requirements

To produce an optimal acoustic experience that complied with LEED acoustic requirements, the final design combined Rockfon's sound-absorbing stone wool ceiling systems with an NRC of 0.95, sound-insulating full-height walls with the correct sound transmission class (STC) rating and appropriate background noise levels. The bright white Rockfon Sonar ceiling panels in Grundfos Global Water Utility Headquarters reflect 85 percent of light from their surface. Along with supporting energy-efficient lighting, the white ceilings' neat, clean appearance also highlights the desired, contemporary architectural style.

*"Our involvement was to work with the project team to help secure the EQc9 Acoustic Performance credit under the LEED rating system,"* says Nick Block, P.E., LEED AP BD+C; Senior Engineer at SLR Consulting. *"...Grundfos was very particular about their acoustic goals, and have their own acoustic guidelines. Our scope pertained to meeting LEED acoustic guidelines, namely reverberation time and mechanical noise."*

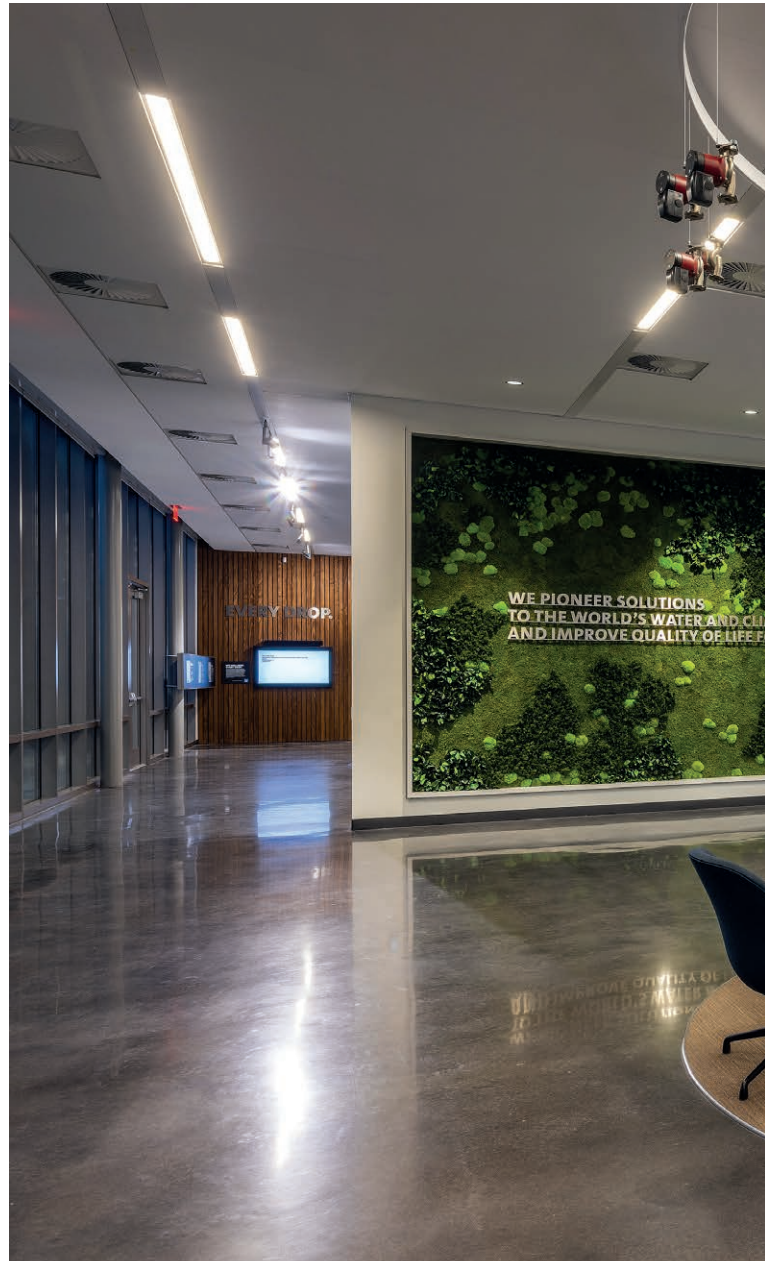
### Sound absorbent by nature

ROCKWOOL stone wool is sound absorbent by nature. Its' high-density makes it extremely resistant to airflow, reducing the ability of noise to travel.

ROCKWOOL acoustic insulations contribute to human health and wellbeing by providing quiet spaces to recover and recuperate in homes and hospitals and by avoiding health issues associated with noise pollution such as diabetes and increased blood pressure.

## LEED driven design

*"Platinum certification was Grundfos' edict and a contract parameter. The acoustical performance was one of those many unnegotiable credits that had to be met,"* says Ryan Bass AIA, Associate at PGAL, the Houston-based architect firm that worked on the project. *"The lighting and reflectance values of all finish surfaces was another critical aspect of design with LEED lighting quality and daylight credits. These were also non-negotiable credits to achieve and the reflective quality of the smooth white panels was a critical component, especially to offset the darker non-reflective floor finishes."*





## Understanding LEED certification

Leadership in Energy and Environmental Design, commonly abbreviated to LEED, is the world's most widely used green building rating system. It provides a framework for healthy, efficient, carbon and cost-saving green buildings and is globally recognised as a symbol of sustainability achievement and leadership.

To achieve LEED certification, a project earns points by meeting criteria that address carbon, energy, water, waste, transportation, materials, health and indoor environmental quality. The projects then go through a verification and review process, and are awarded points that correspond to a level of LEED certification: Certified (40-49 points), Silver (50-59 points), Gold (60-79 points) and Platinum (80+ points). Grundfos achieved LEED Platinum certification for its new Global Water Utility Headquarters in Texas.

### Project:

**Client:** Grundfos Global Water Utility Headquarters

**Location:** Brookshire, Texas, United States

**Architect:** PGAL, Houston

**Contractor:** Design-build contractor: Harvey Builders; Houston

**Installer:** AECO Interior Contractors

**Tiles:** Rockfon Sonar®, Rockfon® Module System

**Grids:** Chicago Metallic® 1200 15/16"

**Square footage:** 45,000

**Year opened:** 2021

**Sustainability:** LEED Platinum

**Product family:** Stone Wool Ceilings, Suspension Grid







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At the ROCKWOOL Group, we are committed to enriching the lives of everyone who comes into contact with our solutions. Our expertise is perfectly suited to tackle many of today's biggest sustainability and development challenges, from energy consumption and noise pollution to fire resilience, water scarcity and flooding. Our range of products reflects the diversity of the world's needs, while supporting our stakeholders in reducing their own carbon footprint.

Stone wool is a versatile material and forms the basis of all our businesses. With approx. 10,500 passionate colleagues in 38 countries, we are the world leader in stone wool solutions, from building insulation to acoustic ceilings, external cladding systems to horticultural solutions, engineered fibres for industrial use to insulation for the process industry and marine & offshore.

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