

Renovation inspiration

- The case study collection



Renovation inspiration – The case study collection

The reasons to renovate are many and far-reaching – from leaving a legacy for future generations and improving our health, to mitigating climate change and regenerating our economy.

Renovation is hitting the headlines once again, as global governments promote energy efficiency renovations for existing building stock as one of the best ways to help our economies recover post COVID-19. The ambitious goal is to achieve the greatest economic benefit and the greenest climate impact in the shortest possible timeframe. All while simultaneously improving our health and comfort – what's not to like?

We've collected 10 of our most interesting renovation case studies from all over the world to inspire your next renovation project. Whether it's upgrading a multi-unit house while protecting its historical façade or constructing a lightweight yet sturdy apartment on the roof of a warehouse, we've got you covered!





A warm – and safe – welcome
for moms and babies alike

Bradford Royal Infirmary, UK



Protecting future roofers with
the ultimate roof system

*The Federal Education Centre for
Carpenters, Germany*



Striking, effective and
in-budget

Hotel Theatre Figi, The Netherlands



85 years of speed, precision
and safety

The Moscow metro, Russia



Saving history, saving a home

Hirsch pharmacy, Germany



Hosting a modern residential complex... on a warehouse roof!

*Sneek warehouse conversation,
The Netherlands*



A master class in acoustics

The Royal Academy of Music, UK



When being fire-safe is beautiful

Bièvre towers, France



Kinder to the environment,
kinder to the pocket!

Viale Murillo, Italy



Much more than a world-class stadium

VTB Arena park, Russia

A nighttime photograph of a city skyline, featuring several illuminated skyscrapers against a dark blue sky. The buildings are lit up with warm yellow and white lights, and some have red lights on their tops. The city lights extend into the distance, creating a dense pattern of small lights.

1.4 million

As 1.4 million people move to urban environments globally each week, the challenge of maintaining healthy, safe and comfortable cities becomes even more urgent.

A warm – and safe – welcome for moms and babies alike at Bradford Royal Infirmary



The Bradford Teaching Hospitals NHS Foundation Trust is responsible for providing hospital services to over 500,000 people across the Bradford district in the UK. Its Women's and Newborn Unit at Bradford Royal Infirmary is one of Bradford's most well-known hospital buildings, where over 200,000 babies have been born since it was established over 50 years ago.

The challenge

Built in the 1960s, the façade of the hospital's Women's and New-born Unit had never been upgraded. Heat-loss, draughts, noise and leaks were just some of the issues that made the five-storey building a cold and difficult space for patients and staff alike.



At a glance:

UK based maternity hospital discovers that teamwork – and stone wool – can future-proof a building.



Thermal properties



Acoustic capabilities



Fire resilience

For Property Tectonics, the architect and lead consultancy company who oversaw the renovation, the team also needed to meet strict criteria in terms of fire safety and energy efficiency on the project.

“We worked extremely closely with the hospital to demonstrate the robustness and safety of the design as well as the products we selected,” explains Richard Rhodes-Heaton, the company’s Principal Surveyor.

While the renovation work was underway, the Women’s and New-born Unit had to be fully operational. This meant that everyone involved in the project had to be considerate of the patients and staff still visiting and working in the hospital.

The solution

The work on site began in November 2017. Property Tectonics decided that insulation from ROCKWOOL and ventilated façade cladding from Rockpanel were the perfect solutions to make the hospital a more comfortable and energy efficient facility for staff and patients.

To start, they installed ROCKWOOL RAINSCREEN DUO SLAB® – a thermally efficient insulation that secures a robust outer surface and a resilient inner face. Made from stone wool, RAINSCREEN DUO SLAB® is A1 fire rated as non-combustible for optimum fire resilience. It brings the added benefit of being highly resistance to wind and rain during construction, which, together with the minimal number of fixings required, made the installation quick and easy. The thermal benefits of the ROCKWOOL solution reduces heat loss and helps the hospital optimise costs by operating in a more energy efficient way.



Rockpanel Premium A2 boards fulfil the highest European fire protection standard and secure a flawless façade design with no visible rivets or screws.

// *The scheme represents a great example of teamwork by hospital staff and their professional advisors - at every level - to produce a very successful outcome.”*

Prof. Trevor Mole, MD Property Tectonics



Proven fire protection

Fire safety was a vital aspect of this project, and Property Tectonics needed to meet strict criteria and to demonstrate the robustness and safety of the design and the products used.

ROCKWOOL’s fire protection solutions can slow the spread of flames, contain fires locally and stop them from spreading further. Resilient stone wool insulation is a key component in fire-resilient buildings, as its fibres are non-combustible and can resist temperatures above 1,000°C.

Extensive testing and reliable quality from ROCKWOOL means that the products are proven to be fire safe – and this was important following the UK Government’s announcement banning combustible materials in all high rise residential buildings as well as hospitals, schools and care homes.



Watch how stone wool can act as a fire barrier

To fulfil the highest fire safety requirements for exterior cladding, Rockpanel A2 façade board was deployed to create a unique identity and authentic appearance to future-proof the building.

“When it came to selecting the cladding for the project, it was a truly group-based decision,” says Richard Rhodes-Heaton. “Property Tectonics put together six different designs, and the Trust as well as the staff picked the option they preferred. It allowed us to involve everyone in the project and give them a say about how their place of work would look, which is important for employee engagement.”

Attractive and fire safe

Applied on top of an aluminium supporting structure and fixed with blind rivets, Rockpanel A2 boards were used in combination with ROCKWOOL's RAINSCREEN DUO SLAB®. The Rockpanel boards weigh very little compared to alternative board materials, such as high pressure laminate (HPL), aluminium composite (ACM) and fibre cement (FCB). Rockpanel can be easily worked with on site and without special tools, saving installation time and costs. It's recyclable and has a confirmed lifetime of 50 years. All boards are as durable as stone and resistant to the effects of moisture, temperature and the weather.

A maternity ward is a special place where the indoor environment is vital. The acoustic properties of the ROCKWOOL RAINSCREEN DUO SLAB insulation also help reduce urban noise transfer into the hospital. Its high-density makes it extremely resistant to airflow and excellent when it comes to noise reduction and sound absorption, reducing sound energy as it passes through the material.

The £1.8m regeneration successfully corrected all the issues the hospital building had – heat loss, draughts, noise and leaks, while protecting the building from bad weather and fire. The result was a much more comfortable and energy-efficient facility that staff, patients and visitors alike could enjoy.



Richard Rhodes-Heaton, Principal Surveyor at Property Tectonics, is pleased that the hospital staff were also involved in the final design choice.

"The scheme represents a great example of teamwork and excellence in project delivery by hospital staff and their professional advisors cooperating and engaging at every level to produce a very successful outcome," says Prof. Trevor Mole, MD Property Tectonics.

A hospital to be proud of

The entire team at the hospital were delighted with the renovation.

"The fact that we were able to keep services running as normal while all this work took place is testament to the support and consideration of the contractors," says Amanda Hardaker, Midwifery and Gynaecology Matron at Bradford Maternity. "We are so pleased with the finished job: the main difference is that we're insulated now and fit for the future. We've gone from having to have extra heaters on in patients' rooms to a really balmy temperature, so that we often don't even need the radiators on. And most importantly it means that we can optimise outcomes for babies. The best thing for new born babies, especially ones which are underweight and more vulnerable, is that the heat service is consistent, which it absolutely is now."



Amanda Hardaker, Midwifery and Gynaecology Matron, is delighted that the renovation ensures the stable temperature needed for new born babies.

"The result creates the right internal environment which saves energy, protects the planet and improves the look and feel of the hospital estate; all achieved whilst maintaining full operation of the Unit."

[Click here](#)

if you have a renovation project that we can help you with.



200 million tonnes of CO₂

Our building insulation sold in 2019
will save up to 200 million tonnes of
CO₂ throughout its lifetime.

Protecting future roofers with the ultimate roof system



Welcoming trainees, architects and engineers since 1927, the Federal Education Centre for Carpenters and Finishing Trades in Gladbeck, Kassel helps preserve interest in timber construction – both traditional and modern – in Germany. The sprawling facility spreads over 13,000 m², with learning taking place in workshops, training and seminar rooms. The bulk of the centre's expansion took place during the 1980s.

The challenge

With a goal to improve energy efficiency, most of the facility was renovated during 2017/2018. Responsibility for the roof areas fell to the local craftsmen from Kühne GmbH, and to master roofer, Dirk Flörke.

At a glance:



An exceptional learning experience occurs when an education centre for carpenters and future roofers needs to install an intricate roof system.



Thermal properties



Acoustic capabilities



Fire resilience



Viewed from above, it's easy to see how the roofs varied throughout the facility. Kühne GmbH renovated a total roof area of around 5,500 m².

"The Federal Education Centre has been expanded again and again. New buildings have been constructed and extensions added over time," explains Dirk Flörke. "So for us, it wasn't about upgrading the roof structure of a homogeneous building complex, but about processing many different roof structures and geometries. That's what made our job tricky and exciting at the same time."

In total, 36 individual roof areas covering around 5,500 m² needed refurbishment and modern insulation installed. Even removing the old roof coverings was challenging, as many used asbestos corrugated sheets that needed to be dismantled and disposed of properly. And to add to the complexity of the project, the refurbishment needed to take place during term time when school was running.



When it came to insulation, the team at Kühne GmbH from Kassel laid non-combustible and pressure-resistant stone wool panels from ROCKWOOL.

The solution

The diversity of different roof shapes and structures meant that ROCKWOOL Meisterdach – a flexible and high-performing stone wool insulation system – was the perfect choice for the project. Not only would the roof insulation help minimise heat loss and reduce heating bills for the Centre, the stone wool would also secure fire and sound protection – both important benefits for a school environment.

Roof insulation

A sure way to increase the energy efficiency of residential and commercial properties is by installing effective roof insulation.

Whether it's reducing heat loss in winter time or keeping cool in summer, increasing the energy efficiency of a building can reduce bills and operational costs.

ROCKWOOL supplies a variety of insulation products for flat or pitched roof applications – all based on premium stone wool to keep your properties safe and the indoor environment comfortable.



Get an overview of the various types of roof insulation

The first step involved installing a ROCKWOOL vapour barrier followed by non-combustible and pressure-resistant stone wool boards. As these boards came with a factory-applied water tight membrane on the outer surface, they provided almost instant weather protection – which resulted in being very useful as the weather was particularly wet during the renovation period!

“The insulation on top of the rafters was the perfect solution for us. The use of non-combustible insulating materials was part of the fire protection concept.”

Helmhard Neuenhagen, Managing Director and Head of the Federal Education Centre

The team installed counter battens on top of the insulation layer, followed by Eternit panels. The entire roof structure was safely anchored with 300 mm long-thrust screws, screwed in at an angle of 90°, and 320 mm long-suction screws at a 60° angle. Kühne GmbH relied on expertise from ROCKWOOL's technical service to make the complex static calculation for the screws.



Managing Director and Head of the Federal Education Center, Helmhard Neuenhagen (right) and Head of Special Projects Dr. Holger Schopbach (left) are looking forward to lower energy costs after upgrading the building envelope and, of course, a better indoor environment for the students.

'Easy' insulation for an intricate installation

For Flörke and the team from Kühne GmbH, the fact that the ROCKWOOL insulation material is easy to cut and prepare proved to be a substantial benefit. They needed to follow the varied geometry of the roof structures and navigate difficult connection areas.

The shed roofs above the workshop halls were particularly demanding, requiring experience and a professional eye with an accurate sense of proportion to cut the insulation panels precisely. So it was relief for the team that they could cut and shape the stone wool to fit perfectly with the roof structure, avoiding air gaps and any possible errors.

Educating on the job!

The roof renovation work also served as a compelling visual aid for the students attending the Centre – and they gained unique and concrete understanding of what is needed in such a large-scale renovation project.

Why do we need roof insulation?

70%

Effective insulation in homes and commercial properties can reduce heating requirements by up to 70 percent¹! And those that are not insulated properly can lose approximately a quarter of the heat through the roof. As well as warm air escaping, there's the chance that cold air can also enter through a poorly insulated roof. In hot climates the opposite can occur, where keeping a building cool is essential.

35-60%

Heat and cooling buildings accounts for 35-60 percent² of the total energy demand around the world. So the resulting reduced energy bills quickly surpasses the cost involved in insulating the roof.

1 https://ec.europa.eu/energy/sites/ener/files/DG_Energy_Infographic_heatingandcolling2016.jpg

2 <https://www.c40.org/researches/mckinsey-center-for-business-and-environment>

"It wasn't just the new generation of roofers that were interested – almost every student enjoyed an educational visit to the roofs in the course of the project," said Helmhard Neuenhagen, Managing Director and Head of the Federal Education Centre. "The work of the team from Kühne GmbH interested almost every student. That is why we made sure that they could experience their work up close."

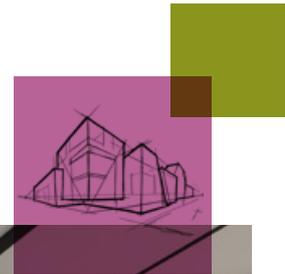
Click here

*if you have a roofing project
that we can help with.*

660 million tonnes of CO₂

Retrofitting Europe's buildings with insulation could save 660 million tonnes of CO₂ – that's twice as much as France emits annually.

Hotel Theatre Figi - Striking, effective and in-budget



Since its humble start as a bakery in 1850, the Hotel Theatre Figi has been an important social gathering point in the town of Zeist in the Netherlands. Under the careful ownership of Ruijs family since 1917, the hotel and concert hall were added to the establishment in 1925, and a full rebuild took place in 1994. By 2017, Diederik and Victoria Ruijs – the third generation in charge of Figi – believed it was time to renovate the building once more, with the theatre lobby ready for a makeover in 2018.

At a glance:



A creative architect and a convincing team at Rockfon Netherlands found a bold and fresh way to improve the acoustics and upgrade the look of a tired theatre lobby.



Acoustic capabilities



Aesthetics

The challenge

The Ruijs family hired interior architect Gerben van der Molen, from Stars Design in Schiedam, to create a fresh and functional redesign for the theatre lobby. A busy space that acts as both the cinema and theatre lobby, optimising acoustics was high on the agenda. The goal was to find a ceiling solution that was both functional and affordable, but also stylish and in line with the creative environment of the lobby. And installation should be hassle-free to ensure that the installation renovation took place to time so that the cinema and theatre could reopen quickly to an appreciative public.



The stunning ceiling used Rockfon Blanka® in combination with a new 3D grid application, Rockfon Color-all®.



Why are acoustics so important?

Poor acoustics are something we've all experienced. Think about that time you were sitting in a hip restaurant with friends, and you ended up forgetting about how delicious the food was as you had to shout to sustain a conversation. Or that evening when your kids were playing in the room next to you, and you couldn't focus on the T.V. show you were watching because the noise seemed to bounce off the walls and drown it out. Well, that's exactly what was happening. When sound waves hit hard the surfaces in a room – such as walls, floors and windows – the audible energy wave that we call noise reflects back into the room causing the overall noise level in the room to rise. Whether at home, in the office, at school or – as in the case of the Hotel Theatre Figi – in the cinema lobby, poor acoustics can be very irritating. Considering that we spend the vast majority of our time inside, it is important to consider the impact acoustics have on our health, concentration, productivity and overall well-being.

There are multiple studies highlighting the importance of acoustics as a significant physical feature of our indoor environment and the impact

that it has on our psychological and physiological well-being. Short term exposure to poor acoustics leads to a lack of concentration; it can increase difficulty processing information and performing tasks and affect speech intelligibility, causing everyone in the room to speak louder. This is known as the Lombard effect or the "Cocktail Party" effect. While in the short term, this can cause irritation, long term effects of continuous exposure to indoor noise pollution can lead to hearing loss, increased heart rate and high blood pressure. The social cost of poor acoustics is expensive, accruing an annual cost of 30-40 billion Euros in Europe alone¹.

To reduce the consequences of uncontrolled acoustics, it's important to introduce materials that absorb and dampen ambient sound levels, preventing reverberation. And to achieve proper sound absorption we need to control the ambient sound pressure levels in a space, which increases speech intelligibility and makes conversation easier to hear and understand. And this is where innovative solutions from Rockfon can make a true difference.



Watch how we put stone wool's acoustic properties to the test

¹ http://www.noiseineu.eu/en/14-socioeconomic_impact/subpage/view/page/57

“When reopening the lobby of Hotel Theater Figi in Zeist, all the guests were talking about the ceiling. That's the best compliment we could get.”

Gerben van der Molen, interior architect from Stars Design



The extra-white surface provided by Rockfon Blanka® secures optimal light reflection and diffusion.

The solution

The architect worked closely with the team at Rockfon, part of the ROCKWOOL Group, to find a solution that stood out from a standard suspended ceiling, but was still within budget. Together, they developed a 3D solution based on a stripped down system ceiling using standard acoustic ceiling panels and grid profiles.

“When the interior architect shared his vision with me, we were able to create a whole new application using available components in a different way,” explains Anton Faber, key account manager Rockfon. “A mock-up at the Rockfon Development Center in Wijnegem convinced both the architect and the client to take a leap of faith and execute it for the first time.”

Transforming a traditional stripped-down rail system

The striking ceiling was created using Rockfon Blanka® in combination with a new 3D grid application, Rockfon Color-all®. By using c-profiles – the product used to close gaps between grid and tiles – the black rail system was highlighted, and then the ceiling panels were placed in an oblique position. This innovative solution allows the architect to maximise acoustics while playing with heights and patterns at the same time, creating a whole new experience. Rockfon Blanka® has a fully matt, smooth and extra-white surface, with high light reflection and light diffusion that contributes to energy

savings and a bright and comfortable indoor environment. To create a playful contrast, Gerben van der Molen chose Rockfon Color-all® in charcoal. The 3D grid application offers new design freedom due to exposed, semi-concealed and concealed edges in a large variety of module sizes and colours.

A result that speaks for itself

The finished ceiling not only looked bold and fresh, it also provided great acoustics, and contributed to the experience of every visitor.

“A suspended modular ceiling is often a ‘must’ when looking for a low-budget ceiling solution,” says Gerben van der Molen, interior architect from Stars Design. “However, a visible grid is not always the most beautiful aspect of the design and architects often try to hide it. But why not use the grid to our advantage and make it stand out more? I discussed my vision with Rockfon key account manager, Anton Faber. Together with the technical specialists, we were able to make this happen by developing a new 3D-application using available components.”

[Click here](#)

if a bold and beautiful ceiling is on your renovation wish-list.

An aerial photograph of a dense city skyline, likely New York City, during the "golden hour" of sunset. The sky is a mix of deep blue and orange, with a faint rainbow visible in the upper left. The buildings are illuminated from below, creating a warm, golden glow. The text is overlaid on the upper left portion of the image.

50-90%

50-90 percent of the global energy used in buildings today can be saved by applying existing energy efficiency products and technology.

85 years of the Moscow metro: Speed, precision and safety



Having recently celebrated its 85th birthday, the Moscow metro has undergone many changes during its lifetime.

From expanding to 15 lines with 275 stations to establishing the Moscow Central Ring and the Moscow Central Diameter, the metro continues to evolve and grow in importance as a means of transport. But one thing remains unchanged, and that's the priority of the safety of passengers and employees.

At a glance:



Stone wool is helping the Moscow Metro to keep commuters safe and comfortable.



Fire resilience



Robustness



Thermal properties

The challenge

Every day, the huge metropolis of Moscow's is served by a hard-working metro system that transports up to 10 million people. Considered to be one of the most beautiful metros in world, it's a well-developed underground system that allows the city dwellers save valuable travel time. But like all metros, it's considered to be a high-risk zone. The very nature of a metro means that many people are accumulated together in a confined space, deep beneath the streets. In the case of danger, it's very difficult to evacuate people quickly. A potential fire – and the related smoke – in such a setting is deadly. That's why designers need to pay extra attention to safety issues when considering construction within the metro system. With the safety of employees and passengers at heart, the Moscow metro has included non-combustible thermal insulation made from ROCKWOOL's natural stone wool as a key element within its renovations and new builds.

The solution

On May 15, 2020, the Moscow Metro celebrated its 85th anniversary. Transporting approximately 2.5 billion passengers per year, and with the double-track lines covering circa 440 km, primarily underground, the number of stations to allow commuters to access the metro is steadily growing. In addition to this new construction, there is constant renovation taking place throughout the metro to increase the level of comfort and safety with the help of modern and high-quality materials and technical solutions.

Metro stations at Rasskazovka, Olkhovaya, Michurinsky Prospekt, Nekrasovka and the transport hubs at Kosino-Ukhtomskaya and Likhobory are just some of the projects that implemented ROCKWOOL's non-combustible products. To secure protection against the weather – and to add extra fire safety – VENTI BATTIS slabs were used for their façades. And at the Nekrasovka station, ventilation systems using ALU1 WIRED MAT were installed to ensure extra resistance to fire.

It wasn't only the station façades that got a makeover, the roofs were also refurbished. Filatov lug and Prokshino stations opted for ROCKROOF – a complete



Robust ROCKWOOL products, based on stone wool, help the façades of many Moscow Metro stations stay strong throughout extreme weather conditions.

insulation system where installation is made simple, as every element needed is included, has been checked and tested for safety and works perfectly in conjunction with other components. ROCKROOF's thermal properties ensure that commuters experience a pleasant indoor environment when passing through these stations, and as a fire-resistant insulation, secure a safe journey for everyone.

Why products from ROCKWOOL?

Being involved in such a long-term – and prestigious – project is a testimony to both the effectiveness of ROCKWOOL's products and the hard work of the Russian team. "We're lucky here at ROCKWOOL Russia that our partners are very loyal to our company brand. They know how good our products are and believe in our quality," explains ROCKWOOL Russia's Managing Director, Marina Potoker.

By the end of 2022, a further 57 new stations will have opened within the Moscow metro, extending the length of the underground network by 450 km. For 90 percent of the capital's residents, the metro will be within walking distance from their homes. And innovative products from ROCKWOOL mean that the transport won't only be more accessible, but also safer than ever.

// *Because we do not build or renovate as we used to do 50 years ago, being aware of the possible consequences of this change, like increased fire risks for example, is critical. Non-combustible materials have an important role to play in keeping modern buildings and their occupants safe."*



Fire safe insulation from ROCKWOOL

Installing fire safe insulation is a great way to ensure the safety of building occupants – and to prevent the spread of fire to limit structural damage.

As a fire can start in any part of a building, it's important to install fire resistant insulation wherever possible. Made from non-combustible stone wool, ROCKWOOL's insulation slows down the spread of fire, containing it within one compartment of a building for as long as possible. This provides vital time for occupants to escape during a fire, while creating a safer environment for firefighters to combat the flames.

ROCKWOOL insulation is made from non-combustible, fire-resistant stone wool that can withstand temperatures above 1,000°C. This helps limit the spread of fire in a building. With minimal organic content, no significant toxic smoke is produced either.



Deepen your understanding of fire safe insulation

Our insulation is classified as A1 according to the Euroclass system. These are the top fire performance classifications, and are based on several characteristics including:

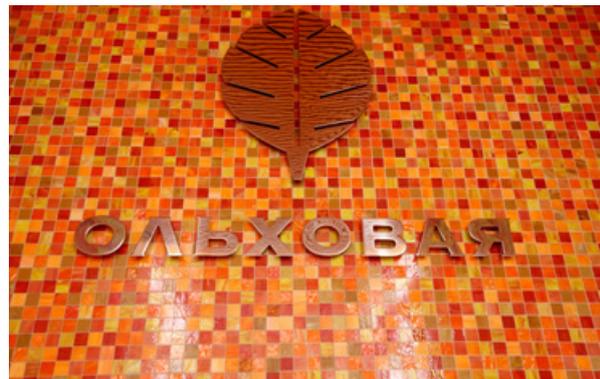
- Ignitability
- Flame spread
- Heat release
- Smoke production
- Propensity for producing flaming droplets/particles

What's more, ROCKWOOL insulation also offers additional benefits, including:

- Thermal properties – in the cold winter months, heat is retained in buildings to keep residents snug and warm, and in the summer time, the same properties help cool air stay within the walls, keeping people cool and fresh.
- Acoustic performance – noise pollution is blocked and absorbed, particularly in noisy urban areas.
- Robustness – made from sturdy stone wool, it provides stability when used in high-rise developments.
- Aesthetics – fire resilient insulation solutions are flexible and can be shaped according to the building.
- Water repellence – in the event of rainfall or moisture, insulation can repel water to keep the building dry.
- Circularity – made from recyclable materials and using environmentally-sustainable processes.



ROCKWOOL's fire-resistant insulation secures a safe journey for everyone using the metro – and a pleasant indoor environment.



Many Moscow Metro stations are benefiting from the unique properties of stone wool.

[Click here](#)

if you'd like more ROCKWOOL inspiration for your renovation project.

8.2% GDP in EU

Construction is very relevant in our economy, employing 10 percent of all workers and contributing to 8.2 percent of the GDP in Europe.

Saving history, saving a home



The impact of a fire can affect many – families, businesses and the community. In 2016, pharmacist Klaus Dewies faced his worst nightmare when a fire broke out in the building that hosted his business and his home. His family had maintained the historic building in the old German town of Haltern am See since 1919. The pharmacy, where Dewies worked, was located on the ground floor and the top floor was converted into a bright apartment for his family. To add to the tragedy, the building itself is protected and considered to be one of the most beautiful facades in Haltern.

At a glance:



Sometimes, a renovation is much more than improving a building... it's about saving a home and someone's livelihood.



Fire resilience



Robustness



After effective collaboration between Dewies, Schade and ROCKWOOL representatives, they opted for the ROCKWOOL 'Meisterdach' system solution, which ensures thermal performance, water and moisture protection and fire safety in one.

The challenge

Luckily, visitors at the neighbouring ice-cream parlour noticed black smoke, so everyone in the building was evacuated quickly and safely. They assembled outside and watched helplessly as the local fire fighters tried to control the fire – and as flames, smoke and around 6,000 litres of water almost destroyed the building. The water alone used to quench the fire could fill six standard car trailers! By the time the fire was extinguished, the roof and interior were completely destroyed.

The investigation carried out by the fire department in the aftermath showed that the trigger occurred during work on the historical facade when a painter tried to remove acrylic resin paint using a Bunsen burner. The existing roof insulation ignited as a result. For Dewies, fire safety became a top priority when considering the resulting renovation of the historic roof and creation of a new roof structure.

The solution

Carsten Schade and his team were hired to take care of the renovation and rebuild project, and they were in for a surprise when they removed the damaged parts of the old roof structure – there were actually two roof trusses!

Pitched roof insulation

Effective pitched roof insulation is ideal for residential and commercial properties, offering additional thermal comfort, sound protection and exceptional fire resistance.

The pitched roof or attic area of a building can be insulated in many ways. Based on local building traditions, requirements and regulations in combination with the usage of the loft, ROCKWOOL offers exciting products for new-build properties as well as renovations.

Made from premium-quality stone wool, there are ROCKWOOL products available for pitched roof insulation below, between and over rafters, as well as insulation that is placed in the loft level.



Want to learn more about pitched roof insulation?



A ROCKWOOL weatherproof vapour barrier was installed to ensure the roof was initially protected, followed by the ROCKWOOL fire-safe insulation solution for pitched roofs.

/// *I have chosen the new insulation very consciously. It's a good feeling that the historical wooden beams – and of course we – are protected by non-combustible insulation."*

Klaus Dewies – pharmacy owner



Klaus Dewies was delighted with the final result, and happy to move back into his renovated, fire-safe home.

"You rarely find a beam construction like this," explains Schade. "An external beam structure with a roof overhang covered the historic beams where they connected with the outer wall. This was to protect them from moisture. In principle, it was a good idea. But in the event of a fire, the fire and smoke could initially go unnoticed in the cavity between the two roof trusses."

Stone wool – naturally fire resistant

Insulating a roof is an effective way to minimise heat loss and reduce heating bills and is important to consider as a major aspect of any roof renovation project.

Non-combustible stone wool was the obvious insulation choice for Dewies. Supported by Schade and his team, they decided on a ROCKWOOL insulation solution for pitched roofs that offered heat, noise and – most importantly – fire protection.

The geometry of the roof was a challenge when it came to installing the modern insulation, as the large dormer windows at the front and back created many ridges and throats. This made a lot of detailed work necessary, requiring insulation and foils to be carefully cut and worked on. Here, the fact that the ROCKWOOL stone wool is easy to cut and prepare proved to be a substantial benefit, which helped the team complete their intricate work while avoiding errors.

The extensive renovation also needed to meet the requirements of the Energy Saving Ordinance 2016 (EnEV). But this was not a concern for Schade and his

Energy Saving Ordinance (EnEV)

The Energy Saving Ordinance – or Energieeinsparverordnung (EnEV) as it's called in German – is an important part of the energy and climate guidelines issued by the government in Germany. First released in 2002, it was reissued and amended several times, with the latest coming into force on January 1, 2016.

The EnEV poses energy requirements for new buildings, taking the structural heat insulation of the building as well as the energy efficiency of the systems used – heating, ventilation, cooling, light – into account.

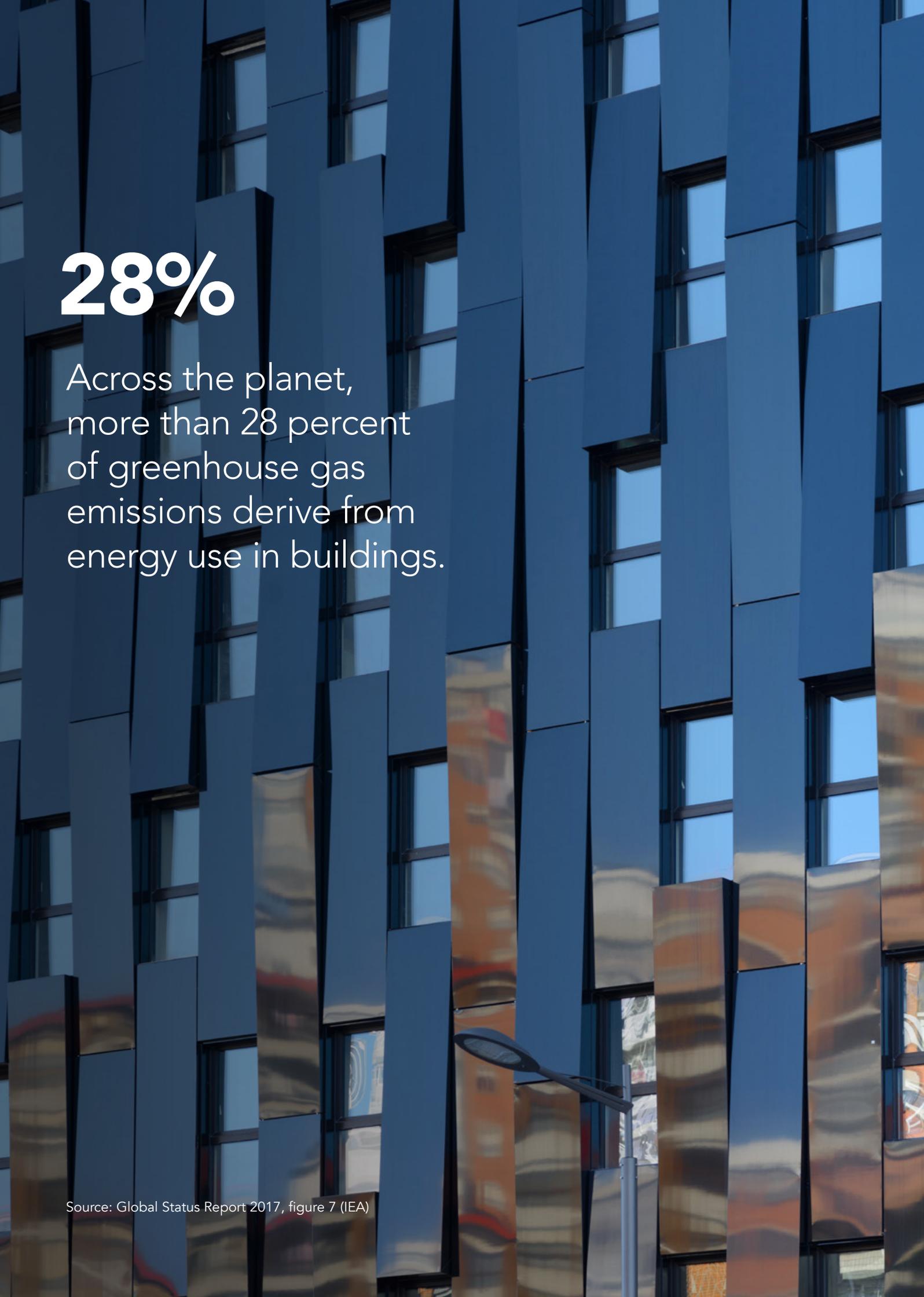


After the renovation, the Hirsch pharmacy reopened for business, continuing to serve the community as it had done for almost 100 years.

team. They could complete the renovation with peace of mind knowing that the ROCKWOOL insulation system was developed in accordance with these requirements.

[Click here](#)

if fire-safe insulation could bring your renovation project to the next level.



28%

Across the planet,
more than 28 percent
of greenhouse gas
emissions derive from
energy use in buildings.

Hosting a modern residential complex... on a warehouse roof!



In the Dutch town of Sneek, an old warehouse was repurposed to serve as much-needed base for assisted living apartments. The Rockzero® Building system from ROCKWOOL ensured that the transformation took place in record time – while securing the highest insulation values.

Dutch real estate developer, RTR Vastgoed, owned an existing warehouse built in the 1950s. Located in a prime residential area right in the centre of Sneek, the potential of the building was huge – particularly if it could be extended vertically.

At a glance:



The Rockzero building system helps an aging warehouse find new purpose by hosting apartments for a local care institution.



Thermal properties



Acoustic properties



Fire resilience

The challenge

The aim was to convert the warehouse into eight split-level apartments, with some being built on top of the existing structure. The apartments would be leased to the local care institution, the JP van den Bent foundation. As the development would take place in a residential area, they needed to be constructed as quickly as possible to minimise disturbance to those living in the area. But the greatest challenge was the fact that some of the apartments would be created above the existing warehouse – more literally put, built on the roof! So the apartments needed to be lightweight yet stable.



Based on the Rockzero building system, the apartments have high insulation values, almost at passive level.

The solution

The design for the transformation and for the development of the new apartments fell to Adema Architects from Dokkum, Groningen and Kampen. Owner and real estate developer, RTR Vastgoed, stood for construction, under the watchful eye of project leader, Bart van der Veer.

Expanding upwards and building the apartments on top of the existing warehouse was actually quite a tricky venture as the foundations needed to be deepened and strengthened. The warehouse location is in demand and very densely populated, so such a complex procedure was not desirable – especially not by the neighbours!

The ideal option was to build lightweight units – and here is where ROCKWOOL's Rockzero system proved to be a gamechanger.

"This lightweight building system makes it possible to build the apartments on a wooden floor that is lighter than a concrete floor," says Van der Veer. "For this transformation from an old industrial building to new apartments in a densely populated area, we had a series of specific questions about building lightweight. ROCKWOOL's Technical Solutions Centre solved it all for us. The involvement of a large supplier for this small-scale project is really special to experience."

Collaborating for success

A floating cement floor was placed on the wooden floor to acoustically insulate the homes. Using the Rockzero building system, based on ROCKWOOL's stone wool, the apartments achieved exceptionally high insulation values – almost at passive level with an RC value of 6 for the façade and an RC value of 7 for the roof. The building system ensured an optimally insulated and fireproof construction, with no cold bridges. The building plan included the installation of approximately 240 solar panels on the flat roof, to supply tap water, warmed by nature, in each of the homes.

It wasn't the first time that RTR Vastgoed collaborated with Adema Architects. Bernd Bove, project manager at Adema Architects, particularly enjoyed working on this transformation challenge, and explained that the entire area – formerly very industrial – has undergone thorough change to become a residential zone.

"The building initially had an industrial look that has been completely transformed to become charming homes," sat Bove. "This pilot from RTR Vastgoed was the last to be rebuilt in this area. In this eight-meter-high building, split-level homes have been built to create a spacious living quarter that is accessed through a cosy communal courtyard. The floor and part of the façades of the old shed have remained intact, in which the steel construction has been adapted to accommodate a wooden floor and the Rockzero building system."

// *The Rockzero Building Systems worked out well, because the system is very flexible and very suitable for making adjustments quickly in the work process. This system contributes extremely well to a smooth construction process."*

Bernd Bove, project manager at Adema Architects

Stephen Muller, key account manager at ROCKWOOL, regularly visited the project throughout the construction period.

“For us, this transformation was extremely interesting, because it was the first time we’d used the Rockzero building system within an existing building. RTR Vastgoed chose our building system to be able to apply a lightweight, fireproof façade with façade cladding, which could be built quickly and flexibly on and against an existing building,” explained Muller.

The Rockzero building system contains columns of stone wool, which have a strong structural load-bearing capacity. The building system is light, flexible, non-flammable and insulates well, due to the fact that it is based on ROCKWOOL’s stone wool.



The Rockzero building system allowed the warehouse to be converted into apartment – and even host apartments on its’ roof!

“As a result, the system is suitable for any type of façade and façade finish,” continues Muller. “In this project, the building contains different types of façade finishes that demonstrate that flexibility, such as existing and new masonry and façade cladding. The system is modular, arrives to the site and can be assembled directly.”

The success of the project at Sneek was the direct result of positive team work from RTR Vastgoed, Adema Architects and ROCKWOOL’s technical solutions centre. By using the Rockzero building system, they could rapidly development safe and comfortable homes for local people with special needs.

Rockzero – making sustainable housing accessible

If it’s necessary to construct a new building, it makes sense to use the latest in available technology to ensure that it’s as energy efficient and sustainable as possible. Nearly zero-energy buildings (NZEB) have very high energy performance – and the small amount of energy that these buildings require comes mostly from renewable sources. According to the EU’s Energy Performance of Buildings Directive, all new buildings must be nearly zero-energy by the end of 2020.¹

ROCKWOOL developed Rockzero to meet this need – a pioneering new system that integrates the natural benefits of stone wool insulation with the structural support of the home. With Rockzero, you can build homes with superior energy efficiency, fire protection, indoor comfort and sound insulation, that deliver on energy performance as calculated and that are airtight yet breathable. Rockzero homes are lightweight and modular, allowing new homes to be constructed quickly, meeting standards that exceed local regulations and giving long-lasting durability. This makes it easier to construct next-generation sustainable homes – while using less valuable resources. Thanks to the Rockzero Revit Plug in, customers can also receive support in the digital space using BIM (Building Information Modelling).

The performance of Rockzero exceeds current and future energy regulations without the use of other energy sources and with no restrictions on the orientation of the building or choice of primary heating source. Rockzero has no thermal bridges, so it performs consistently, regardless of the building’s layout. As stone wool insulation is robust and durable, you benefit from predictable low energy and maintenance costs for decades. With Rockzero, you’re ready to meet the requirements of tomorrow – and protect future generations.



Download our Rockzero brochure to learn more

¹ <https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/nearly-zero-energy-buildings>

Click here

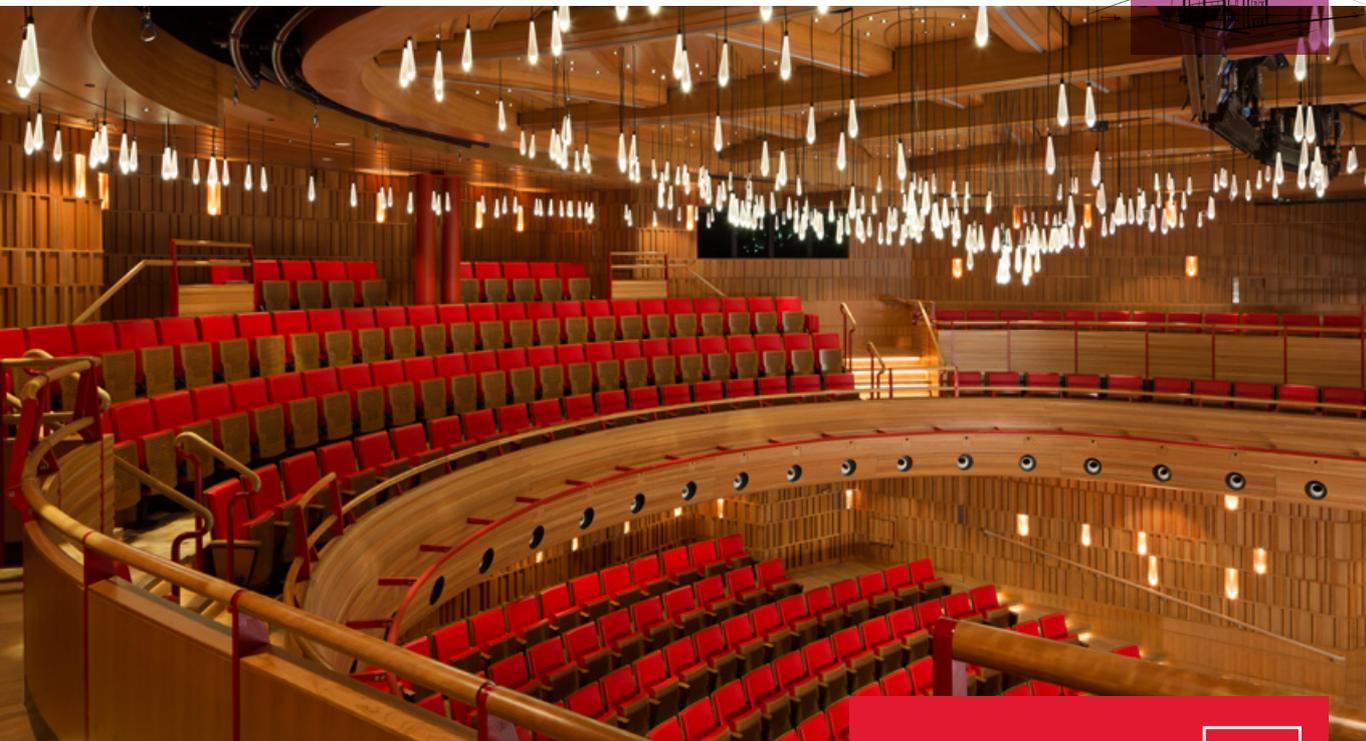
if you have a renovation project that we can help you with.



100x

Over the lifetime of its use, the building insulation we sold in 2019 will save 100 times the carbon emitted in its production.

A master class in acoustics at The Royal Academy of Music



The recent project marks one of the most significant building and renovation projects in the Academy's near-200-year history.

To achieve the very best performance demands commitment, skill and passion. The team behind the recent reinvention of the Royal Academy of Music in Regent's Park, London called on all three qualities to create the stunningly beautiful, acoustically brilliant and inspiring spaces for staff and students. The project included completely refurbishing the 309-seat Susie Sainsbury Theatre and creating the new 100-seat rooftop Angela Burgess Recital Hall. Alongside these impressive spaces, the Academy also renovated 14 practice and dressing rooms, developed five new percussion studios, a large refurbished jazz room and a new control suite for its audio-visual recordings department.



At a glance:

Improving acoustics is an important aspect of most renovations, but never more so than when revitalising London's Royal Academy of Music.



Acoustic properties



Thermal properties



Fire resilience

The challenge

Creating impeccable acoustic environments was key during the project. But it was equally important to control how sound travelled throughout the spaces, while ensuring effective isolation from sounds from other areas.

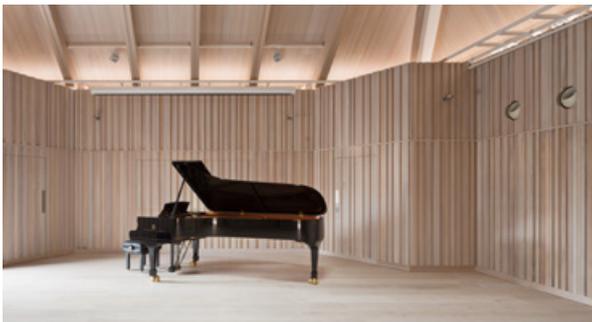
The new performance spaces are hidden behind the listed façade of the Royal Academy of Music's Edwardian premises, surrounded by Grade I and Grade II listed buildings and located within the Regent's Park conservation area. The architects, Ian Ritchie Architects, needed to carefully design the new spaces so that they would seamlessly blend into the historic site.

The new Angela Burgess Recital Hall sits above the Susie Sainsbury Theatre, meaning it needs to be acoustically isolated from what was below as well as the other buildings in the vicinity.

"This one of the biggest challenges for the project," comments Richard Shanahan, Director at All Metal Roofing. "Sound quality was of absolute importance within the performance spaces themselves, but we also had to limit its travel around the building and externally."

The solution

As part of the redevelopment of the building, the Royal Academy of Music worked with engineering consultancy, Arup, to create spaces that were completely isolated in terms of acoustics and noise transfer.



The renovation saw the creation of spaces that optimised acoustics and were completely isolated from external noise.

// *We are delighted with the finished result. Working with ROCKWOOL to understand and guarantee the sound performance of the insulation was a crucial part of the project."*

Richard Shanahan, Director at All Metal Roofing

Why ROCKWOOL for the Royal Academy?



ROCKWOOL worked with the team at All Metal Roofing to specially create a 50mm version of the HARDROCK® Multi-Fix solution. Its unique Dual Density stone wool composition is why HARDROCK® Multi-Fix (DD) is renowned for its excellent acoustic reduction, absorption and impact performance, whether from people, machinery or rain on the roof.

HARDROCK® Multi-Fix (DD) is dimensionally stable and will provide long term consistent thermal performance over its lifetime. It also provides the highest fire safety rating of any flat roof board insulation on the market with a Euroclass (A1) non-combustible fire classification and LPCB approval (LPS 1181 Part 1, BS 476: Part 21, EN 13501-1)

All Metal Roofing also installed ROCKWOOL RWA45 100mm and 50mm insulation. ROCKWOOL RWA45 has been developed for thermal, acoustic and fire performance in a range of construction types. RWA45 is made up of high-quality resin bonded slabs in a variety of thicknesses. Specialist facings are available to order to meet the specifications of unique projects.



Learn more about improving sound quality of your building

This included looking at external noise such as the nearby underground and, as the various concert spaces are so tightly intertwined, the sound coming from the individual rooms. Arup, Ian Ritchie Architects and The Royal Academy of Music teams collaborated to create spaces that were structurally isolated from each other to minimise sound transfer. The Recital Hall itself is actually built as a self-supporting space placed on top of the existing building.

In order to complement the structure of the building and ensure each space was acoustically isolated, the contractors for the project, All Metal Roofing, selected insulation from ROCKWOOL as the ideal material.



The renovation created multiple new spaces that are suitable to host concerts and events.

“We created a multi-layered approach to the installation, which included installing plywood with vapour and acoustic barrier insulation on both the floors and walls,” explains Richard Shanahan. “We knew we could trust the ROCKWOOL insulation for its performance and acoustics properties. We worked with the ROCKWOOL team closely during the specification stage to evaluate the acoustics properties of the insulation to ensure it met the strict criteria of the Royal Academy of Music.”

The ROCKWOOL slabs can be applied to an array of general building applications for acoustic and thermal insulation of partition walls, ceilings, floors and roofs. The multi-use solution is well suited for easy application throughout constructions. Importantly for the Royal



The project has impressed many, winning numerous awards since its' completion.

Academy of Music project, ROCKWOOL RWA45 insulation is both water repellent and vapour permeable, which helps to prevent moisture build-up, damp and rot; condensation was a particular concern due to the type and age of the building.

Meeting royal standards

The renovation project has been a huge success for the Royal Academy, with the result being that they have more suitable space to hold concerts and events. The ROCKWOOL solution complements the structure of the building and ensures that each space is acoustically isolated, meaning that every performance is fit for a king.

“We have estimated the performance of the roof at 58db and the wall at upwards of Rw 65 dB,” says Richard Shanahan. “This means we met the criteria the Royal Academy of Music required.”

And it's not only those involved in the project that are impressed. The project has already won the RIBA London Building of the Year and the AJ Retrofit of the Year Award as well as many others since its completion in 2018.

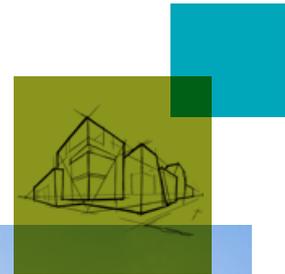
[Click here](#)

if sublime acoustics are vital to your renovation project.

18,000 jobs

For every €1 billion invested in renovation, 18,000 local jobs are secured.

Bièvre towers – When being fire-safe is beautiful



Watered by the Bièvre, a tributary of the Seine, the town of Antony is located 11 km outside the centre of Paris. When aging residential towers located on the hills needed refurbishment, it proved to be a chance to improve the look and general attractiveness of the area.

The challenge

Many architects face the challenge of creating buildings that ensure optimum fire safety – but that also meet their design dreams. There are many ways to comply with safety and building regulations, but what's the best option when if you don't want to compromise on design?

At a glance:



Sometimes renovation can result in a complete make-over for the building, proving that practical can be beautiful!



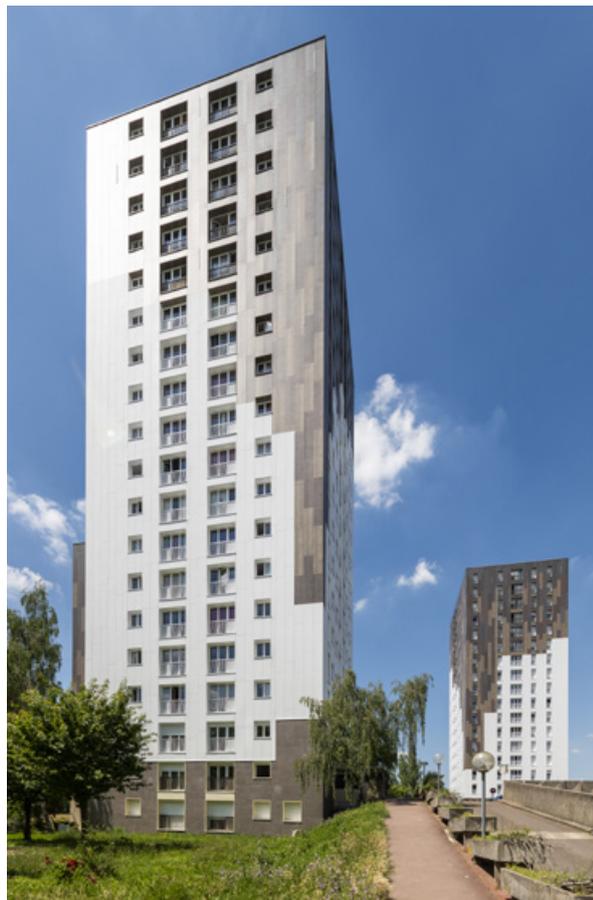
Fire resilience



Aesthetics



Thermal properties



The photo to the left shows the Bièvre towers before their renovation, and the photo to the right shows how façade cladding upgraded their look as part of their renovation.

The solution

Irèna Morawiec, from Architecte Associée Groupe, Arcane Architectes, was tasked with designing the upgrade of the Bièvre towers. Located on the hills in the leafy Parisian suburb of Anthony, she was asked to dramatically improve the look of the building as part of the refurbishment. Their prominent location in the town meant that their look affected the appeal of the area. Due to the fact that they are residential towers, the moment Morawiec saw their height and number of windows, she realised that fire safety would also play

a large part in their renovation. After careful research, she discovered that innovative façade cladding and insulation could make big difference to both the safety and the appearance of the buildings.

“After we had done our research very thoroughly, we decided to choose a combination of stone wool insulation from ROCKWOOL and Rockpanel Woods and Colours for the façade cladding,” explains Irèna Morawiec.

// *Rockpanel Woods look so much like real wood. I find it absolutely astonishing.”*

Irèna Morawiec, Architecte Associée Groupe, Arcane Architectes.

A basalt-based façade – that looks like wood!

In high-rise buildings, fire safety is the number one priority – and with a beauty-boost also on the agenda, Morawiec truly believed that the Rockpanel and ROCK-WOOL combination was the perfect solution. The architect group presented two designs to their client, Hauts-de-Bièvre Habitat – the housing association who own the towers.

“The first option included a faded colour effect and the second one looked more like a chocolate fountain,” said explains Morawiec. “The second option was selected by the building owner and it works very well. Rockpanel Woods look so much like real wood. I find it absolutely astonishing.”

As the housing complex was very outdated, their improved new looks delighted the residents – as did the peace of mind knowing that the non-combustible stone wool insulation vastly improved their safety.



Using Rockpanel Woods and Colours for the façade cladding gave the housing complex a beautiful, modern look.

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 an 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.



Click here for more inspiring ways to use Rockpanel Woods

The new eye-catching exterior of the towers also contributes to the general attractiveness of the neighbourhood as a whole.

In France, using fire resilient façade panels on high-rise buildings is relatively new, as traditional 'bavettes' are often used. The combination of light-weight panels that are fire resilient and available in many attractive designs is what made Rockpanel stand out in this case. And although it was the first time for the architect group to use this solution, it certainly won't be the last.

Click here

if you want advice about how best to give your building a makeover.



5-6%

Based on a renovation of medium depth, the internal rate of return (IRR) over 30 years is 5-6 percent.

Viale Murillo – Kinder to the environment, kinder to the pocket!



Over 100 years old and located on a busy street in central Milan, this beautiful building on the Viale Murillo took advantage of national renovation incentives to become more energy efficient. It's a mixed neighbourhood in the very heart of the city, with banks, offices, restaurants, shops and residential buildings mingling together. No.10 Viale Murillo is a residential building, housing nine units over five floors.

The challenge

Built in about 1905, this apartment building craved a deep renovation to reduce its energy use and limit the noise levels stemming from the bustling city outside.

At a glance:



This renovation reduced energy bills by a whopping 80 percent!



Thermal properties



Acoustic properties



Fire resilience

Classified as 'G' – the lowest energy class – the building used inefficient and expensive kerosene-fired heating and guzzled 175kW/m² per year – most of which escaped through the aging roof and floors. The renovation needed to respect its historic façade – and take place while the occupants continued to live in their apartments without disturbance by the construction workers.

The solution

In support of incentives made available by the Municipality of Milan to promote the benefits of energy renovation, ROCKWOOL Italy partnered with Enel X, an energy transformation services company, and Teicos Group, a Milanese construction company, to completely transform the building on Viale Murillo.



The renovation needed to respect the historic façade of the building, and ROCKWOOL REDArt thermal insulation system proved to be the ideal solution.

// *This project constitutes a model to follow and replicate: A building that combines innovation and respect of the past. Implementing sustainable actions at a social, economic and environmental level, we can improve the quality of life of citizens. The renovation of buildings represents a fundamental step in planning the future of the city. We therefore continue on this path."*

Giuseppe Sala, Mayor of Milan

Reducing energy consumption and utility bills

A key challenge throughout the renovation was to preserve the historical character of the building. This was achieved by a very detailed survey of the classic façade combined with the application of a customised external insulation system that could accurately and flexibly follow the original mouldings on the building. The project team identified the ROCKWOOL REDArt thermal insulation system as being the perfect fit, preserving the old design of the building while improving energy efficiency and guaranteeing high level performance over time. REDArt proved to be an ideal choice, as the system offers excellent, lasting thermal properties as well as securing fire protection. As the building is located in a very vibrant part of the city, the insulation system also secured welcome relief from external noise pollution, boosting the acoustic comfort within the building. The ROCKWOOL technical support team were on hand to advise throughout the renovation and ensure the system exceeded expectations.

“By selecting a versatile material such as stone wool for the realisation of the exterior thermal insulation layer, it was possible to obtain multiple advantages,” says Paolo Migliavacca, Business Unit Director of ROCKWOOL Italia S.p.A. “These ranged from the improvement of insulation with a consequent reduction in energy consumption to the achievement of more comfortable environments, with enhanced sound insulation and fire safety.”

The renovation focused heavily on the addition of effective thermal insulation, with a goal to help increase internal comfort and reduce consumption and operating costs. The outdated heating system was also replaced with an efficient gas-fired heat pump. By combining effective insulation with a modern heating system, the building’s energy class jumped from G to C. In turn, this reduced energy consumption by a whopping 74 percent, the equivalent of 48kW/m², and utility bills were reduced by 80 percent!

Get wiser about External Thermal Insulation Composite Systems

Otherwise known as ETICS, this innovative product is a compact, multilayer insulation that helps improve the energy efficiency of new and existing buildings.

The greatest amount of heat loss can occur through the building’s façade, as it’s usually the largest surface area between its internal and external environment. A great way to avoid this heat loss is by insulating external walls from the outside. And this is exactly what ETICS does. Whether an individual detached house or an entire apartment block, ETICS insulates the vertical envelope of a building. This prevents temperature loss, weather related damage and issues with condensation.

Made from many layers, ETICS includes a base coat, reinforced mesh and a finishing coat. The types of materials used can vary between systems, making it flexible to fit different building structures and designs – and making it a popular choice for renovate existing apartment blocks.



Click here if you want to learn more about ETICS

Today, the renovated residential building on Viale Murillo now ranks among the most advanced real estate assets in the capital of Italy’s Lombardy region, representing a model for the entire city to aspire to.

Click here

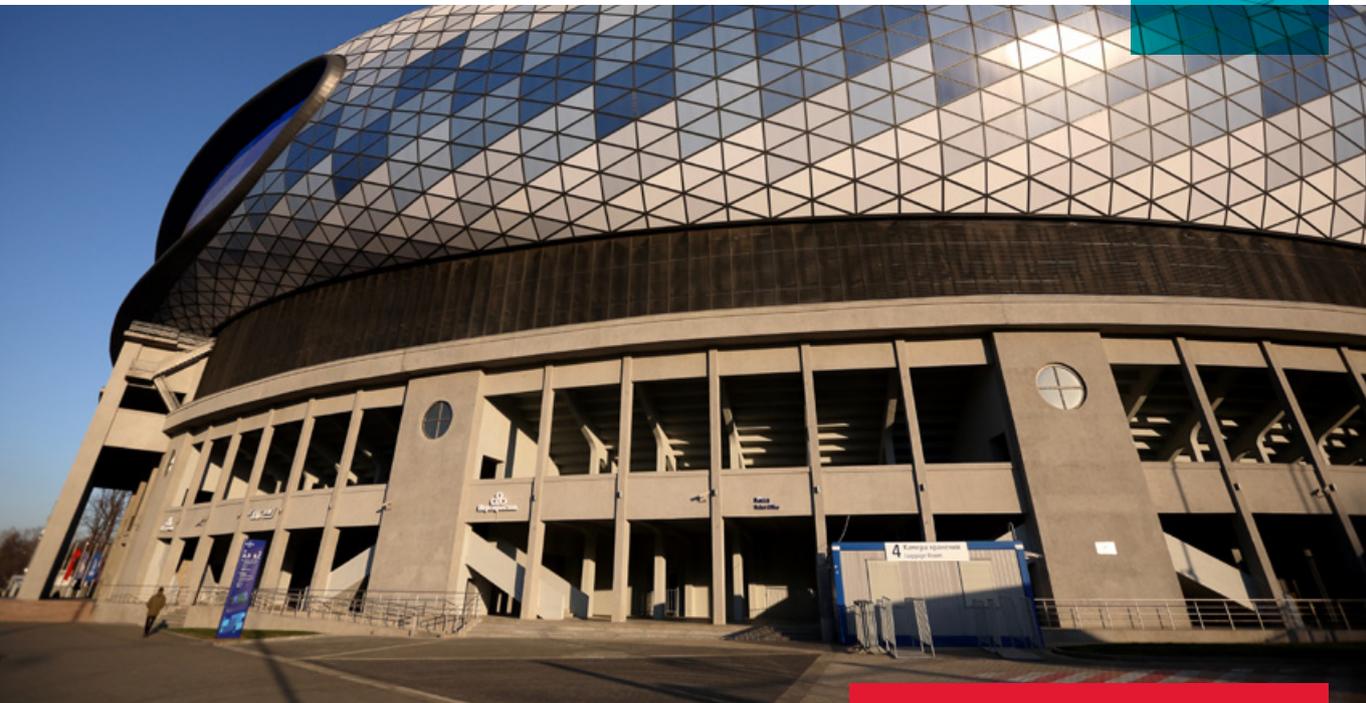
if the aim of your renovation is to slash your energy bill.

A modern building with a lush vertical garden facade and balconies overflowing with plants. The building features large glass windows and a dark, angular architectural style. The greenery is dense and vibrant, with various types of plants and flowers. The overall scene is bright and sunny, suggesting a clear day.

70%

Buildings can save a staggering 70 percent more carbon emissions than the next most cost-effective sector – industry – with the same level of investment.

VTB Arena park – Much more than a world-class stadium



It may resemble a futuristic spacecraft, but the stunning VTB Arena has taken great care to preserve its ties to history. The reconstructed and refurbished home of FC Dynamo Moscow, one of Russia's most famous soccer clubs, is built on top of the original 1928 stadium's perimeter wall, with a statue of legendary goalkeeper, Lev Yashin, gracing the main entrance.

The stadium is part of the spectacular project referred to as VTB Arena Park. Spanning 300,000 m², the project also includes the Dynamo hockey rink as well as a park, shopping and entertainment centre, office and apartment buildings, five-star hotel, and an underground car park with 1,600 spaces.

At a glance:



A celebrated soccer club, a 5 star hotel, luxurious apartments and a luscious park, the VTB Arena certainly has it all – including copious quantities of stone wool to insulate the roofs, walls, floor, pipes and ductwork.



Acoustic properties



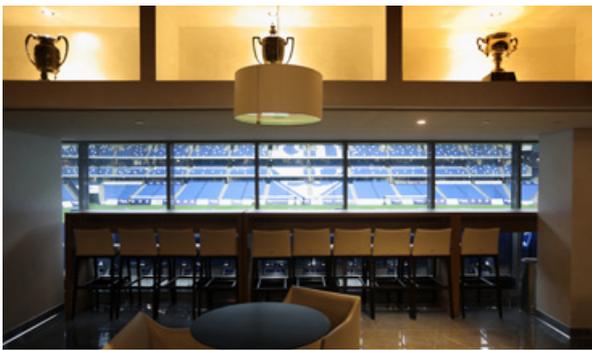
Fire resilience

The challenge

Located just five km from the Kremlin, the project's size and prestige meant that it received a lot of public attention – not least because the stadium belongs to the legendary football club, Dynamo Moscow. The historic stadium walls were preserved as part of the reconstruction, with many die-hard fans eagerly awaiting the final result, so there was no room for mistakes!

The goal of the project was to combine sports, entertainment, commercial and residential facilities in a unique location within the historical green area at the very heart of Moscow. Its very nature means that people – their comfort and safety – was key to its success. Only the best materials were considered for the construction – and fire safety, energy efficiency, thermal insulation and noise reduction was high on the list of the owners' priorities.

And unsurprisingly, considering massive size and prominent location of the project, time was a critical factor.



The historic stadium walls of Dynamo Moscow were preserved as part of the reconstruction.

The solution

Sergey Kuznetsov, the current Chief Architect of Moscow, was managing partner of the architectural association, SPEECH Tchoban & Kuznetsov, who looked after the general design of the project. For a prize-

winning development praised for its contemporary and innovative approach, what better than using prize-winning insulation, also famed for modern innovation. A match made in heaven!

Dynamo Central Stadium – A short history

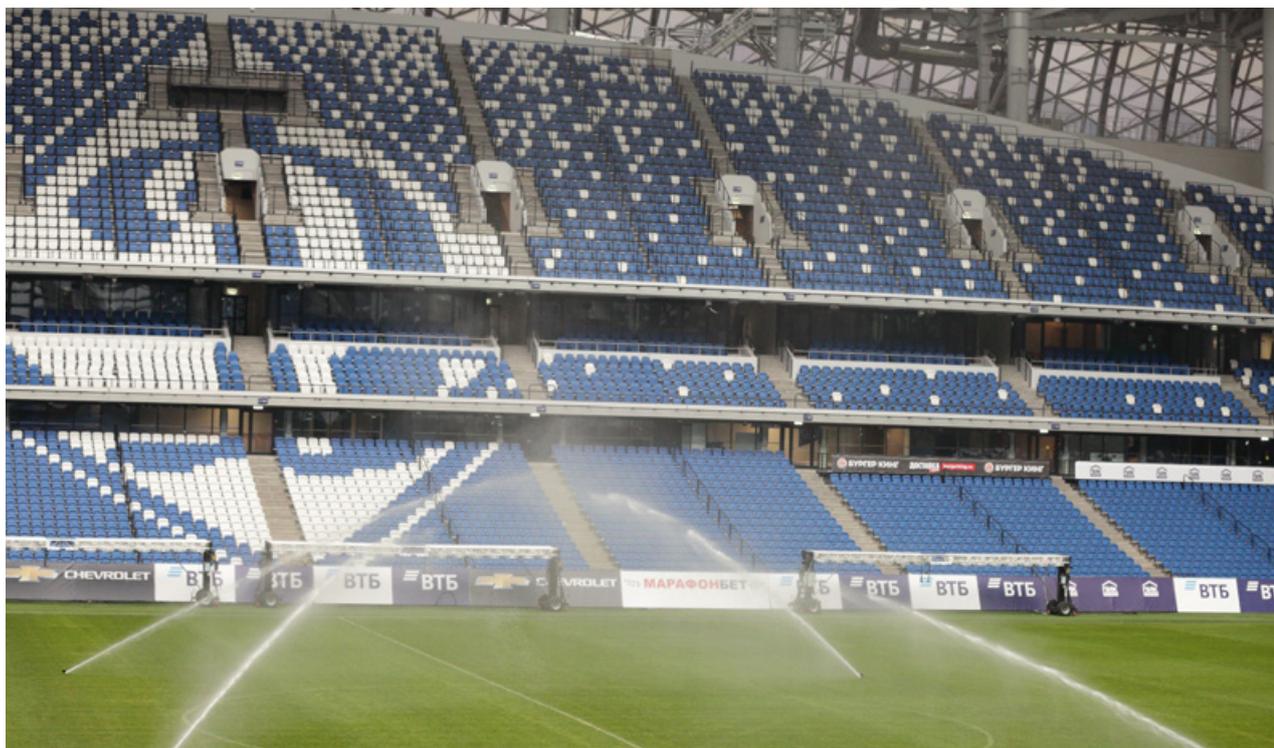
Designed by architects Arkadiy Langman and Lazar Cherikover, Dynamo Central Stadium was established in 1928. The Dinamo metro station opened in 1938, making the stadium much more accessible to the general public. An athletics track – no longer in use – circles the football pitch, and a monument in honour of legendary goalkeeper, Lev Yashin (1929-1990), stands at the stadium's north entrance with VIP boxes positioned above the entrances to the north and south stands.

In 2008, the stadium celebrated its 80-year anniversary – and during the same year, it closed for demolition, with FC Dynamo Moscow playing their farewell match on November 22, 2008. The stadium's main tenant, FC Dynamo Moscow, moved to Arena Khimki in the Moscow suburb of Khimki.

Today, the Dynamo Central Stadium – a multi-functional sports and entertainment complex – has been developed as part of the overall reconstruction of the stadium. The stadium and arena share one roof within the boundaries of the historic stadium's walls, making the project unique. The surrounding residential area, Arena Park, hosts the five star Hyatt hotel, offices, residential buildings and shopping, with the complex served by two metro stations.

// *If you look at the diversity of the spaces in this complex, combined with the millions of people expected to use them each year, helping the owners achieve a high level of fire safety, energy efficiency and comfort is quite rewarding, especially for such an important project like this."*

Marina Potoker, Managing Director, ROCKWOOL Russia.



The VTB Arena park project has allowed FC Dynamo Moscow return to their original home. The space also includes the Dynamo hockey rink, a park, a shopping and entertainment centre, office and apartment buildings, a five-star hotel, and an underground car park.

ROCKWOOL's dual density products were key in clinching the deal. Time was of utmost importance and installation time is slashed by 50 percent when using dual density products. As a primary supplier, ROCKWOOL has a variety of its stone wool products installed across all VTB Arena Park spaces. This includes more than 130,000 m² of several types of stone wool insulation in the floors, walls and roof. Not only that, but 70,000 m² of stone wool technical insulation cover the heating pipes and ductwork, ensuring the building's utility infrastructure is fire safe and that precious heat is preserved to keep visitors warm throughout Russia's cold winters.

The VTB Arena park project has breathed new life into the area, and ROCKWOOL is proud to be part of this exceptional project that brings entertainment, comfort and safety to city revellers in Moscow.

Dual density technology

ROCKWOOL uses a special manufacturing process to create dual density products. Consisting of a high-density outer layer and a lower-density sub-layer, this technology brings extra benefits to many of the ROCKWOOL products; including flat roof insulation, ETICS and ventilated façade insulation products. Dual density products are exceptionally strong, with a firm and robust surface that is balanced by a less dense, more flexible underside that can better adapt to unevenness in the substrate. Dual density technology provides compressive resistance, excellent sound absorbency and many other benefits for different applications.



Click to understand more about dual density technology

Click here

if you have a renovation project that we can help you with.

Resilient buildings are crucial in adapting to a 1.5°C world, and urban design and spatial planning policies need to consider extreme weather conditions to ensure comfort and avoid displacement.



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And you're just one click away from access to experts who can turn your renovation dream into a reality.



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