

Project Info

Knightsbridge Private Park, a Luxury London Living in Central Moscow

FOAMGLAS®
Building

FOAMGLAS® cellular glass used for flat roofs, terraces and façade insulation

Development
company
RESTAVRACIA N





Knightsbridge Private Park, Moscow centre. FOAMGLAS® for thermal insulation in new deluxe-class residential complex.

Knightsbridge Private park is a splendid new deluxe-class residential complex constructed in the most prestigious and picturesque area of historical Moscow centre – in Khamovniki. This old picture postcard district, located in one of the many curves of the Moscow River, is unusually rich in historical monuments and places of interest. It is home to many museums, churches and monasteries.

The development

The development concept of the project includes four low-rise mansions with a total area of 49,900 m², set within a 2-hectare private park. This exceptional place holds also a private kindergarten, a wellness centre with a swimming pool, and a club café. This is the only residential complex in Moscow that includes a private park. The seven-floor mansions have identical layout and stylistic solutions. The architectural concept includes four types of units – conventional apartments, townhouses, apartments with terraces and penthouses.



- 1 Knightsbridge Private park, new deluxe-class residential complex in the historical centre of Moscow, next to Moscow River.
- 2 Restavracia N, Interior Design.
- 3 Exterior view. Photos and renderings: Restavracia N

Infrastructure of Utmost Convenience

Best state-of-the-art materials and technologies, for outdoor and indoor

The project meets the stringent requirements of premium class real estate: location in the historical center, individual design concept, infrastructure of utmost convenience, impeccable quality of work, best state-of-the-art materials and technologies. The departments offering round-the-clock services at a level typical for hotel operators are controlled by RESTAVRACIA N's management company.

RESTAVRACIA N was established in 1993 and pioneered the development of the deluxe clubhouse market in Moscow and St. Petersburg. The company started with the restoration and reconstruction of unique architectural monuments. Today the company's portfolio features over 20 completed projects.

World-renowned interior and landscape designers (David Linley, Andrew Martin International, Chris Beardshaw, Eric Valeev) worked together to combine universal trends with traditional ideals offering stunning, bespoke interiors for ultimate luxury living.

One of the basic ambitions of Knightsbridge Private Park project was to recreate the spirit of London; architects have given the facades and interiors a certain sophistication

whilst retaining the fineness and restraint of neoclassical English architecture. The design has symmetry and rectilinearity. Neoclassicism combines a regard for tradition and reverence for the classics. Architects employ in their work concepts symmetry, proportion, units, harmony and grace. They emphasized order and reason, restraint, commonsense and conservatism.

The high quality implementation of the project is ensured by an exceptional well-adjusted combination of traditional materials, modern technology, conceptual design and care for the environment.

High aesthetic and construction standards characterize Knightsbridge Private Park, which combines premium natural materials, efficient, modern technology and environmentally sound solutions.

The four buildings are reinforced concrete-framed, faced with high-quality natural stone. Supporting walls feature 640 mm thick brickwork with 'warm ceramic' technology, ensuring high levels of insulation and soundproofing. Windows are made of high-quality timber cased in protective aluminium and using low-emission glass; glazing accounts for more than 70% of the building's total façade area, making the residences exceptionally bright.



- 4 Sophisticated interiors, retaining the fineness and restraint of neoclassical Russian spirit. Photo: Restavracia N
- 5 Modernisme and reverence to tradition. Photo: Restavracia N
- 6 The residences are exceptionally bright, due to the large glazing units.



FOAMGLAS® Applications



FOAMGLAS® can meet the most demanding environmental challenges with its unique performance properties

- Impermeability.
- Constant insulation efficiency.
- Dimensional stability: With FOAMGLAS® insulation there is virtually no movement caused by thermal variations.
- Compressive strength: Lightweight, FOAMGLAS® insulation has the compressive strength to withstand loads that can crush other insulating materials.
- Non-combustibility: FOAMGLAS® insulation is totally fire resistant. It is all glass, so it cannot burn.

FOAMGLAS® high performance insulation systems

FOAMGLAS® has been chosen as thermal insulation behind the cladding and for the flat roofs because it offers unmatched performance in all conditions and climates, especially during the strong winter in Moscow.

Façade insulation systems

- Large format stone cladding
- Cavity wall insulation

When heavy material such as natural stone or decorative concrete is used as a cladding, one key criterion is the durability of the wall. The insulation material must also have the same long service life. The replacement of the insulation will be a costly exercise. With its extremely long service life and references more than 50 years old, FOAMGLAS® insulation is the best choice.

There are a lot of good reasons for choosing FOAMGLAS® behind a cladding system and RESTAVRACIA N's management company did that choice!

FOAMGLAS® is impervious to water and water vapour; it has no capillarity and is vermin proof. Its high compressive strength makes the insulation resistant to compression – even under permanent loading. It has dimensional stability and resistance to expansion or swelling even under severe temperature fluctuations and moisture conditions.

The thermal insulation value remains as installed, for the lifetime of the building!



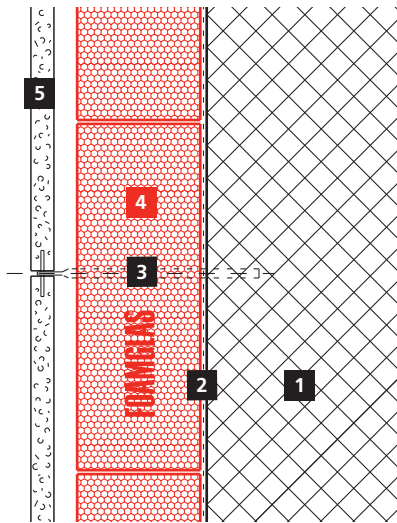
FOAMGLAS® provides unrivalled fire protection to the building

For fire protection behind a ventilated cladding systems with several levels, the need of a non-combustible insulation material should be obvious. In case of fire, the chimney effect created by the ventilation space means that the flame will spread quickly.

FOAMGLAS® is totally non-combustible and cannot contribute to a fire nor give off toxic fumes or smoke; it is also totally free from HCFC, HFA and pentane. Furthermore, FOAMGLAS® is produced out of glass and is the only thermal insulation which is absolute airtight. It doesn't burn and doesn't support fire with oxygen. Even it stops the fire and acts as real fire barrier. ASTM fire test are showing the best fire results for FOAMGLAS® regarding smoke development, surface burning. It is rated as non-combustible material, like concrete or bricks.

Façade Insulation Systems

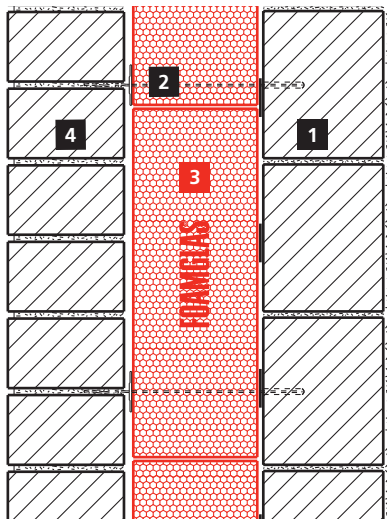
Schematic drawing, Ventilated façade with large format stone cladding



Fully mineral system

- 1 Concrete
- 2 Primer coat
- 3 Resin anchor
- 4 FOAMGLAS® W+F, 13 cm, fully bonded with PC® 74 A2 adhesive (joints closed)
- 5 Large format stone slab cladding

Schematic drawing, Cavity wall insulation



Fully mineral system

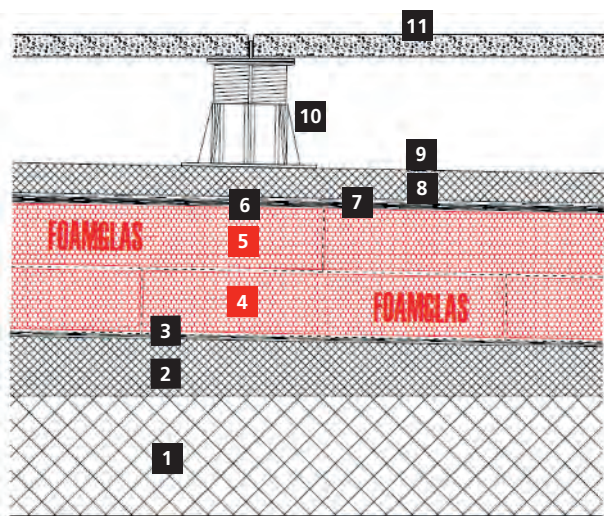
- 1 Interior brick wall
- 2 Resin anchor
- 3 FOAMGLAS®
- 4 External brick wall

- 1 FOAMGLAS® façade insulation works ongoing.
- 2 Non-combustible system: insulation (fire rating Euro Class A1) and adhesive PC® 74 A2. No fire spread across the façade.
- 3 PC® 74 A2 is a mineral adhesive, free from solvents and non-combustible.



FOAMGLAS® Roof Insulation System

Schematic drawing, Raised access floor

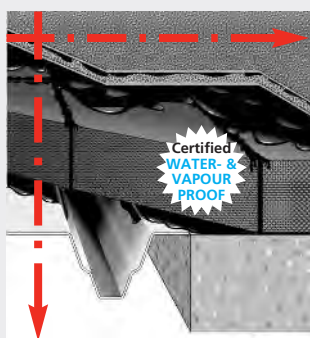


- 1 Reinforced concrete slab
- 2 Screed to fall
- 3 Building waterproofing membrane
- 4 FOAMGLAS® T4+, 10 cm, installed in full adherence with PC® 56 (joints closed)
- 5 FOAMGLAS® READY BLOCK T4+, 10 cm, installed in full adherence with PC® 56 (joints closed)
- 6 Bituminous waterproofing membranes in 3 layers
- 7 Polyethylene film
- 8 Reinforced screed
- 9 Liquid waterproofing layer (PUR)
- 10 Buzon support pad
- 11 Ceramic plates

Accessible Compact Roof with tiles on support pads

RESTAVRACIA N's management company choose FOAMGLAS® because it will ensure long-term protection of the building and allow full use of the flat roof.

FOAMGLAS® cellular glass insulation is indeed absolutely ideal for the most demanding roof situations. With a closed cell vapour tight internal structure, its capability to withstand high compressive loads and to provide a permanent thermal performance; FOAMGLAS® is proven to stand the test of time.



FOAMGLAS® insulation protects the roof assembly from moisture migration

- FOAMGLAS® Compact Roof offers full waterproofing, each component has proofing capacities:
- the waterproofing membranes
 - waterproof cellular glass insulation
 - sealed joints
 - bonding adhesive/bitumen on substrate

Result

- The FOAMGLAS® Compact Roof is impervious to water and water vapour, which means no condensation, leaks or deterioration of the assembly for the life of the building.
- Full bonding of all components means no moisture migration.
- FOAMGLAS® is vapour impermeable so it can never absorb moisture.
- The total adhesion concept ensures that all elements of the roof build-up provide an assembly that is free from differential tension and movement between layers.
- Total adhesion improves the wind uplift resistance in exposed site conditions.

Ecology and Sustainability

Ecology and Sustainability. FOAMGLAS® insulation meets with the highest standards.

Selecting truly sustainable products is also part of the design process for Knightbridge.

Sustainability is a key element, from construction through to energy consumption and insulation, making this the first residential complex in Russia to pass the British BREEAM certification for environmental friendliness in building systems and choice of materials.

Knightsbridge Private Park receives Green Award 2014; it won the Residential Development category in recognition of its sustainability and excellent workmanship by the professional community.

It is also certified under the standards of BREEAM, the British green construction system

FOAMGLAS® insulation is manufactured from minimum 60% locally sourced recycled glass, including scrap vehicle glass and off-cuts from the window industry. Raw materials are mineral based and abundant natural resource. The hermetically sealed FOAMGLAS® glass cell structure is naturally produced, it's free from ecologically harmful blowing agents and flame retardants. Mutagenic, or carcinogenic chemicals are not used during production. FOAMGLAS® cellular glass insulation does not contain organic compounds, oil or oil by products, or toxic or flammable materials. FOAMGLAS® is an inert non-toxic material.

The BRE have assessed our standard density materials (100 kg/m³ & 120 kg/m³) which correspond to an On-line Green

Guide Rating of 'A+' for FOAMGLAS® W+F, and 'A' for FOAMGLAS® T4, FOAMGLAS® T4 TAPERED insulation, FOAMGLAS® READY BOARD, FOAMGLAS® FLOOR BOARD and FOAMGLAS® WALL BOARD.

When carrying out a BREEAM assessment it is possible to use the full range of FOAMGLAS® products because the credits for the selection of insulation are based on the weighted Green Guide rating for the thermal resistance provided by each product in the building. This gives you the freedom as the designer to use FOAMGLAS® products with a higher density were you need to use the other physical properties of FOAMGLAS® such as the compressive strength, fire rating, vapour resistivity and thermal mass in your design whilst still achieving significant credit.

FOAMGLAS® has an exceptional durability. After many years in service, both the physical and thermal properties of this material have proven to remain constant. Real payback, in physical and thermal performance, for many years, is what our customers have come to expect from the global FOAMGLAS® team.

FOAMGLAS® has now been awarded Europe's top award for sustainability by natureplus®. This award supports our ethos of the use of renewable materials and is based on a full cradle to grave lifecycle analysis.

FOAMGLAS® is sold throughout the world and has achieved environmental ratings with a number of internationally recognized organizations and regional standards which reinforce our message on long term sustainability.



BREEAM®



Project

Knightsbridge Private Park
Moscow

Owner

RESTAVRACIA N

Architect

A. Kurennoy

Contractor

GP SMU Z

Material

FOAMGLAS® W+F slabs
FOAMGLAS® T4+ slabs

FOAMGLAS® consultant

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