RIVERSTONE®

UNCOVER THE SOURCE

DISCOVER NATURAL PHYLLITE

TOPOGRAPHIE DES TERRORS

LOCATION
Berlin, Germany

PROJECT TYPE
Commemorative Museum

PRODUCT
Riverstone Brushed &
Natural Finishes

SCOPE
5,370m^2

FOLLOWING THE NATURAL TRADITION

Phyllite stone beds were formed millions of years ago, when in tectonic terms the Earth was still astonishingly active.

Pushing, pulling, shunting and shearing forces worked over huge periods of time and on a continental scale.

Deposited silts and mud, subjected to heat and pressure modifications during these geological batterings, were repeatedly folded, compressed and recrystallised.

As a result, the original sediments metamorphosed into new rock types. Now, in the twenty-first century, we extract Phyllite from an ancient sequence of Pre-Cambrian strata dated from around 640 million years ago.

This extra length of time in the ground has allowed the initial stone structure to evolve in such a way that its technical credentials – in particular water absorption and durability – are second to none.

Whatever the construction method, Phyllite enhances both traditional and contemporary architecture.

Architects enjoy working with it not just for its all-round performance as an architectural product, but also because of its intrinsic design qualities and aesthetic appeal.

RIVERSTONE ORIGINS

The Riverstone quarry is located in La Represa, deep in central Argentina, situated between the Pampas and the Andes mountain range.

Riverstone is a Phyllite stone formed within a pre-Cambrian rock sequence around 640 million years old.

It is the only source of this type of its kind locally, and there are only a few sources of Phyllite stone available worldwide, making commercially accessible Phyllite stone extremely rare.

RIVERSTONE PHYLLITE QUARRY

LOCATION
San Luis, Argentina

AGE
Pre-Cambrian

COLOUR
Medium Grey

APPLICATIONS
Architectural Stone & Roof Coverings

PRODUCT FEATURES

Material:	Riverstone
Stone type:	Phyllite - Part of the schist/quartzite family
Structure:	Crystalline
Colour:	Medium grey in colour with a tinge of green
Distinctive Characteristics:	Unique reflective sheen
Place of origin:	San Luis, Argentina
Producer:	SSQ Group

Riverstone Phyllite has a natural medium grey finish that is free from any pigmentation, making it impervious to the effects of bright sunlight. It is a particularly high-density rock, meaning its hard-wearing surface will not take on general atmospheric dirt or scar and pit as a result of acid rain in more polluted environments. Its low porosity also ensures exceptional resistance to the damaging effects of the freeze-thaw cycles on the rock.

It is often used internally where its rich colours create a striking effect and where its riven texture provides a floor with a natural non-slip finish. It can be used effectively for many other internal functions, including wall and swimming pool cladding, window sills and work tops, thanks to its excellent tensile strength.

Externally, Riverstone can be laid to a dramatic effect: while drawing on the traditional use of paddle stones, larger flooring tiles or irregular patterns, it offers a choice of shading and texture to benefit any project.

KEY BENEFITS

- Riverstone has a natural medium grey colour and is devoid of artificial pigments, so it does not fade in strong sunlight.
- Riverstone is non-porous, therefore it is resistant to frost, as well as to wet and dry cycles. The very low coefficient of expansion means that it is unaffected by changes in temperature.
- Riverstone is stable with no adverse reaction in polluted or exposed environments (e.g. acid rain and salt).
- Riverstone is non-combustible.
- Riverstone has a very high flexural strength, meaning the stone's durability will be unaffected even when meeting varied thickness requirements.
- Exposure to harsh environments and weathering factors will not affect the appearance and aesthetics of the surface.

FINISHES

Natural Split

Expertly split by hand with a traditional riven surface.

The natural riven finish of Riverstone provides excellent anti-slip surface.

Brushed Antique

A smooth matt finish retaining the intrinsic properties of the natural split.

The brushed finish of Riverstone enhances the natural colour of the stone and highlights the characteristic veining.

TECHNICAL PROPERTIES

Standard	Description of test	Result	Commentary
EN 1936	Density and Porosity	2790kg/m3 0.2%	Riverstone is denser than most stones, therefore it has a better life expectancy. The low porosity represents a good wearing surface that resists infiltration by polluting articles.
EN 13755	Water Absorption at Atmospheric Pressure	0.2%	Riverstone achieves extremely low water absorption which is an indicator of its minimal susceptibility to damage during freezing.
EN 14157	Abrasion Resistance	25mm	Riverstone performs within the criteria of the test, which assesses the strength of the bonds between the comprising minerals, testing more than just the basic hardness of the stone.
EN 14231	Slip Resistance	Dry: 68, Wet: 51	The pendulum test values above 36 indicate low slip potential, proving that Riverstone overperforms in both wet and dry conditions, proving it as health & safety compliant.
EN 12372	3-point Flexural Strength	54.4MPa	Riverstone meets the criteria for flexural stress, flexural strain, elasticity in bending and the flexural stress-strain response of the material.
EN 13161	4-point Flexural Strength	49.2MPa	The achieved results prove a low likelihood of cracking or breaking when used for external cladding.
EN 12371	Frost Resistance	44.4MPa	During the 56 freeze-thaw cycles used to perform the test, Riverstone achieves significant results above the minimum expected value of 30.6MPa.
EN 12370	Salt Crystallisation	-0.05% change (pass)	On the basis of not exhibiting any significant changes as a result of the testing, the stone offers good resistance to the effects of salt crystallisation.
EN 14066	Thermal Shock	-0.02%	The test did not induce any physical or aesthetic changes, therefore the stone offers resistance to thermal shock.
EN 13364	Breaking Load at Dowel Hole	5.65kN	Riverstone was subjected to transverse pull-out tests to determine the mechanical and physical behaviour of the stone, deeming it suitable for dimensional cladding.

STANDARD SIZES

FLOORING TILES:

Brushed Antique

Thickness (mm)	Width & Length (mm)
10	200, 300, 400 x random length
15	500 x random length
20	400 x 400
	400 x 600
30	300, 400 x random length
	600 x 1200

Natural Calibrated

Thickness (mm)	Width & Length (mm)
10	300 x 300
	300 x 600
	200, 300 x random length
20	200, 300 x random length

Natural Uncalibrated

Thickness (mm)	Width & Length (mm)
9-15	200, 300 x random length
15-25	200, 300 x random length
25-35	200, 300, 400 x random length

SLABS:

Brushed Antique & Sawn:
600 mm x 1200 mm x 20mm
600 mm x random length x 30mm

SILLS, TREADS AND RISERS:

Sawn strip with manufactured finish:
600 mm x 1800 mm maximum length

PAVING AND WALLING:

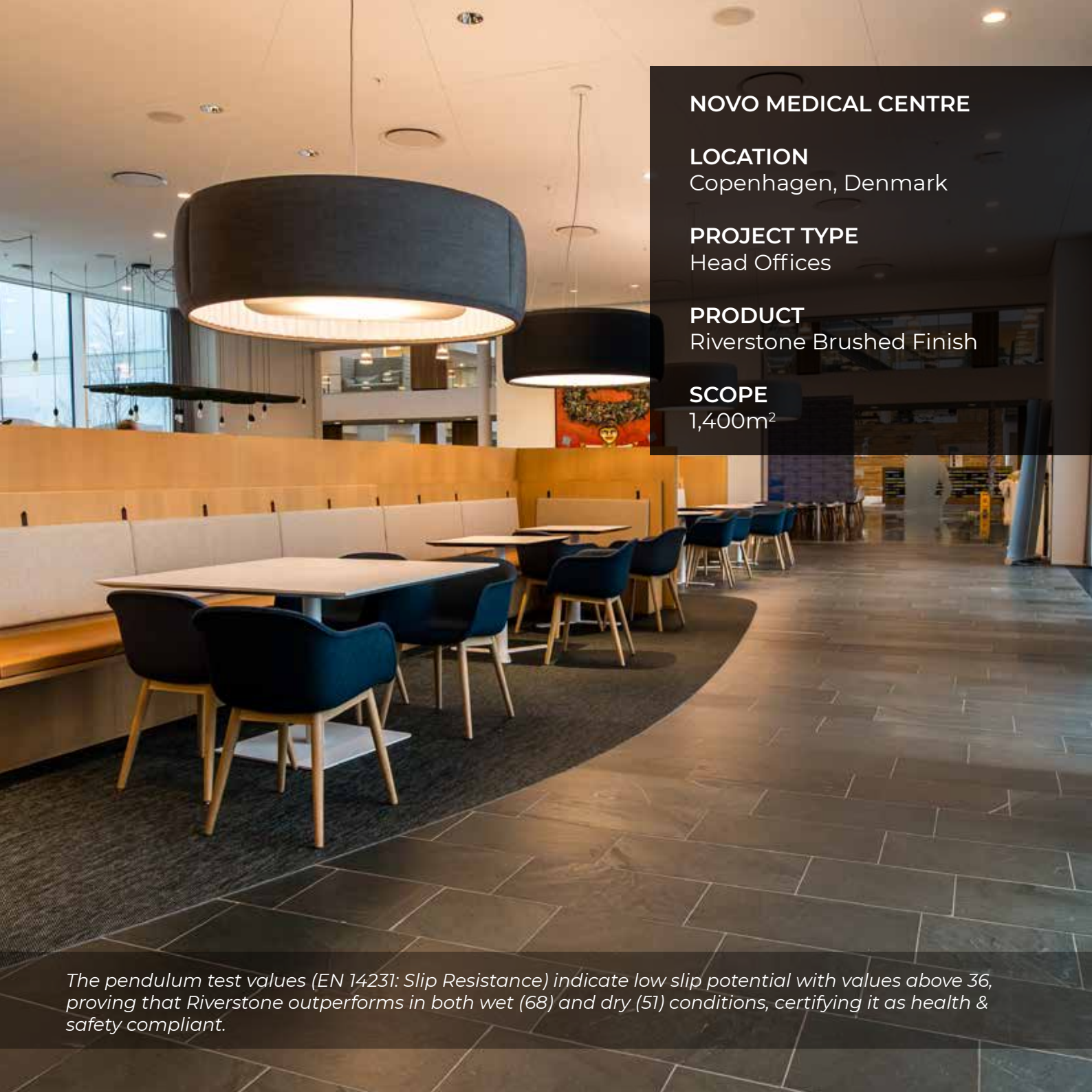
Crazy Paving:
10-20 mm, 3-6 pieces per m2
20-30 mm, 3-6 pieces per m2
Other dimensions available on request

Rustic Walling:
Various dimensions

RIVERSTONE INTERIOR FLOORING

The use of Phyllite has increased in popularity over the last few decades, due to its ability to be brushed. Riverstone is also available in a “hand split” riven finish, which can be calibrated and gauged to ensure that a flat overall appearance can be achieved where necessary.

Often used as an internal floor covering for shopping centres, museums and hotel lobbies, Phyllite’s durability lends itself to applications where heavy foot traffic resistance is required.



NOVO MEDICAL CENTRE

LOCATION
Copenhagen, Denmark

PROJECT TYPE
Head Offices

PRODUCT
Riverstone Brushed Finish

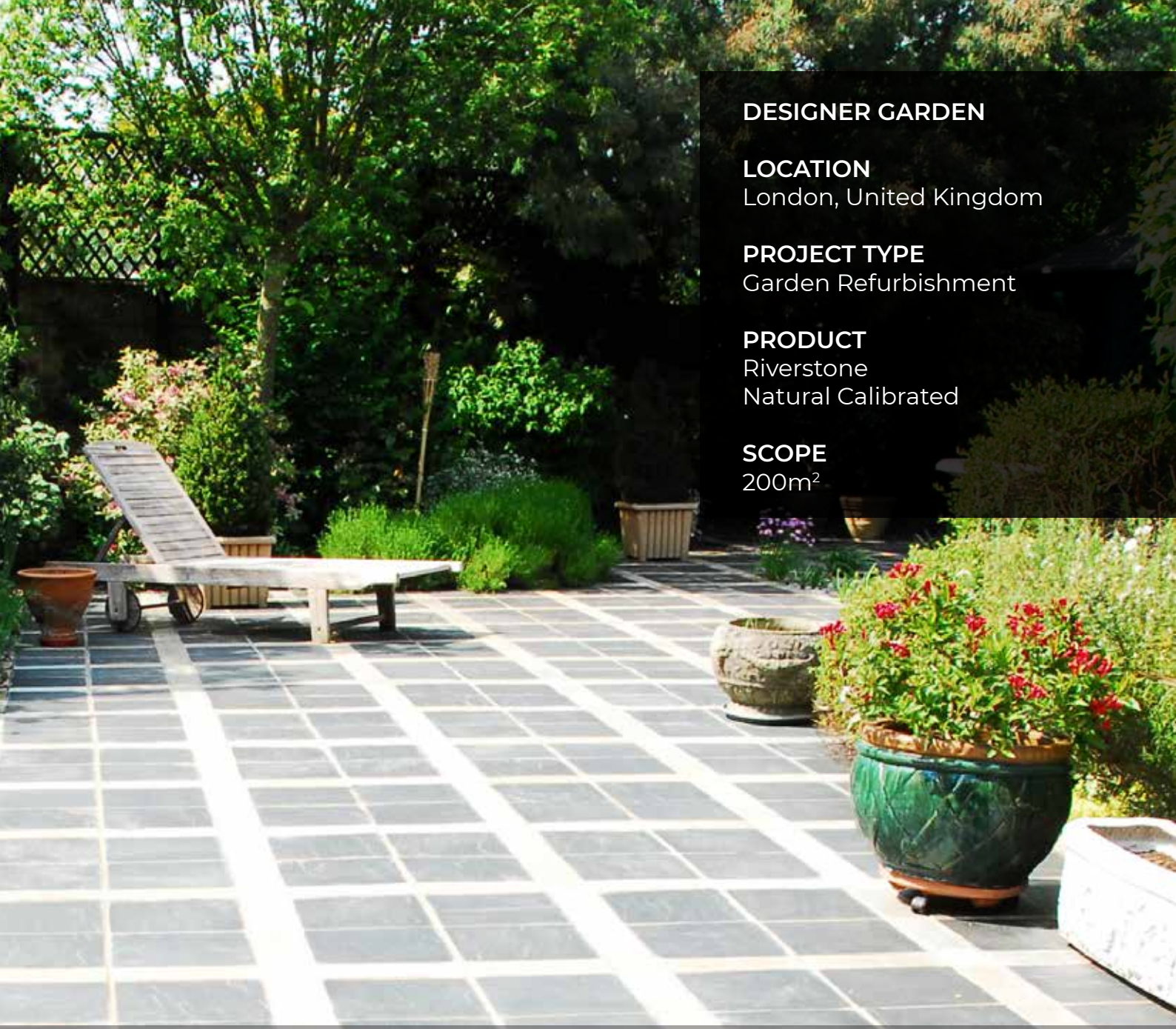
SCOPE
1,400m^2

The pendulum test values (EN 14231: Slip Resistance) indicate low slip potential with values above 36, proving that Riverstone outperforms in both wet (68) and dry (51) conditions, certifying it as health & safety compliant.

RIVERSTONE LANDSCAPE

Riverstone is an excellent natural paving material and is ideal for external flooring and hard landscaping in both residential and commercial environments. The rich colours and naturally tactile texture of Riverstone provide a durable and long-lasting finish to any scenery.

The hard minerals offer good resistance to abrasion and ensure hardly any maintenance problems when used for landscaping. Supplied in a variety of thicknesses, Riverstone is suitable for patios, driveways and sidewalks.



DESIGNER GARDEN

LOCATION
London, United Kingdom

PROJECT TYPE
Garden Refurbishment

PRODUCT
Riverstone
Natural Calibrated

SCOPE
200m^2

When considering the freeze-thaw cycles on natural stones, it is vital to single out frost as one of the main reasons for decay. With a minimum change of 7% (EN 12371: Freeze Thaw Test) Riverstone exhibits virtually no changes during extreme weather conditions.

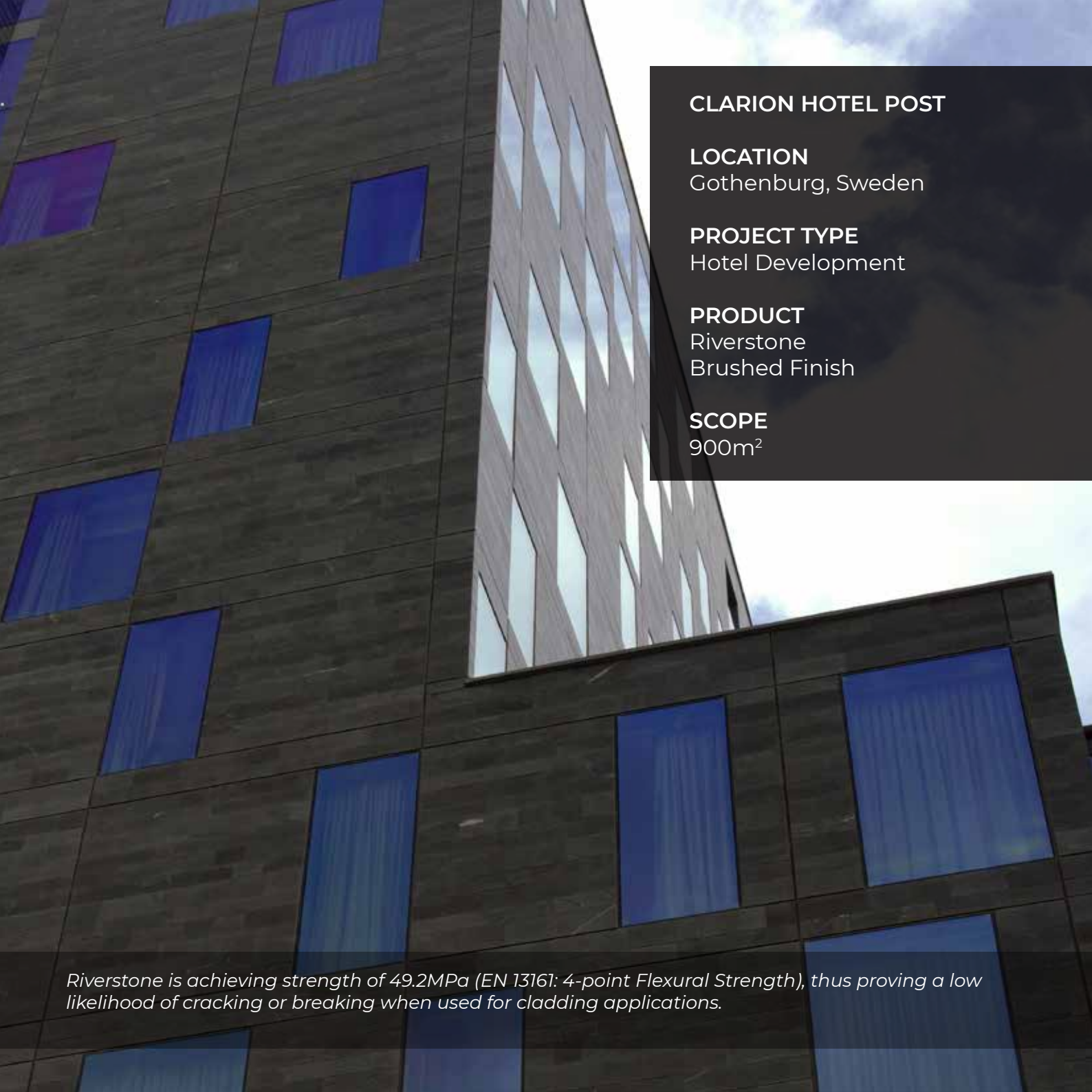
RIVERSTONE DIMENSIONAL CLADDING

An increasingly popular option is dimensional stone cladding - available in several machine processed and natural finishes. The beauty of this solution derives from the full geology of the rock mirroring itself on the exterior – with striking veins of quartz and mica crystals on full display.

RIVERSTONE WALLING

Riverstone can be produced in a variety of different shapes, sizes and thicknesses suitable for interior and exterior wall applications.

Rustic walling is often a by-product of the main production process. The varied colours and rustic nature of these stones recreate the appearance of the quarry in its original form.



CLARION HOTEL POST

LOCATION
Gothenburg, Sweden

PROJECT TYPE
Hotel Development

PRODUCT
Riverstone
Brushed Finish

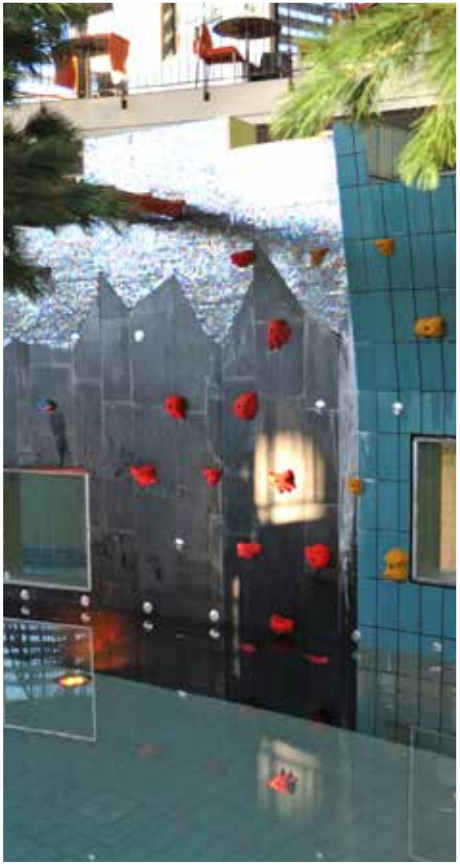
SCOPE
900m^2

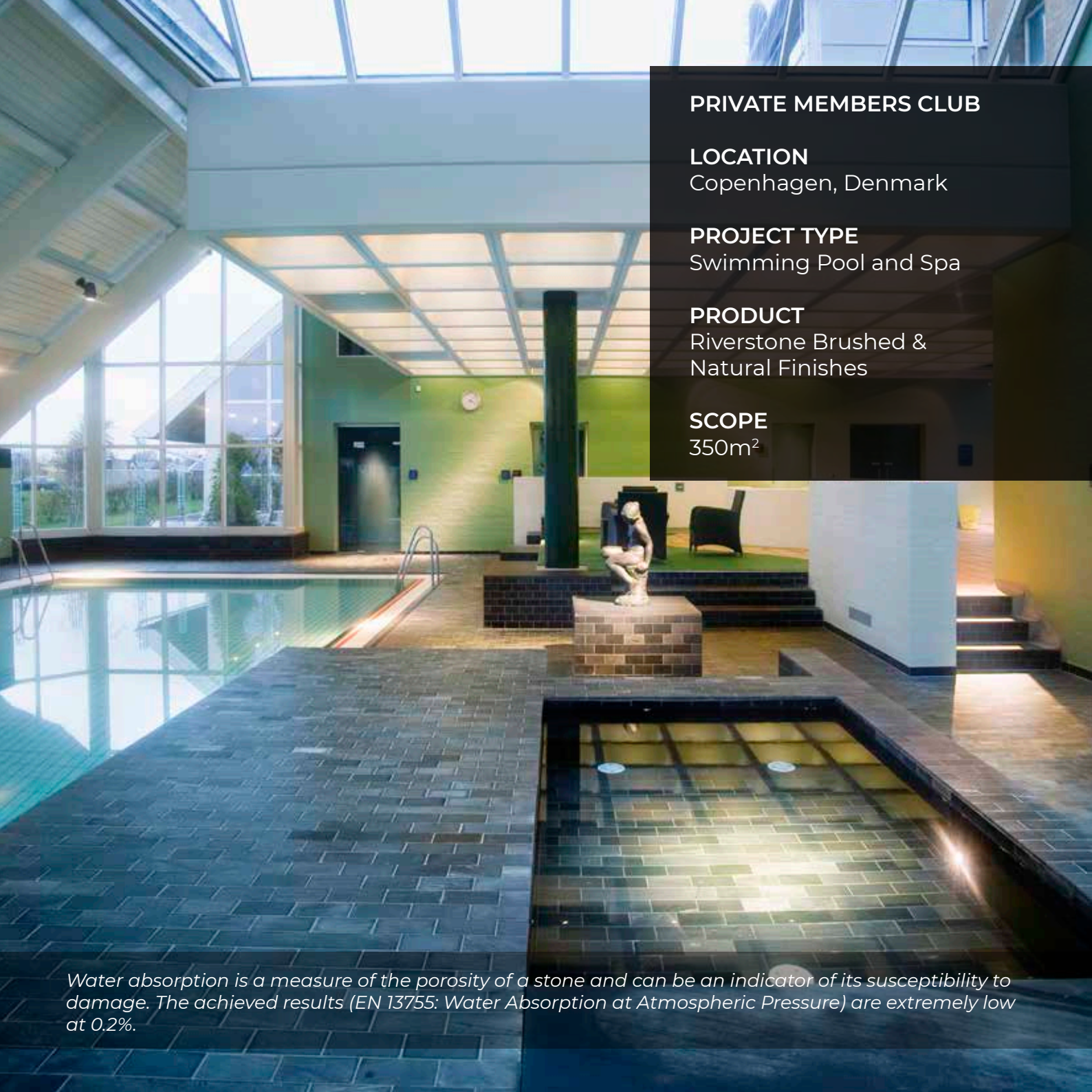
Riverstone is achieving strength of 49.2MPa (EN 13161: 4-point Flexural Strength), thus proving a low likelihood of cracking or breaking when used for cladding applications.

RIVERSTONE SWIMMING POOLS & BATHROOMS

Unlike other stones, Phyllite is an excellent solution for indoor and outdoor swimming pools. Some of Riverstone's unique characteristics are its extremely low water absorption and imperviousness to liquid stains.

Used equally in the commercial and residential sectors, Riverstone brings the desired refinement to any swimming pool, bathroom or sauna, because of the inherent 'life and character' of the stone, while providing the luxury end of the market with a reliable solution.





PRIVATE MEMBERS CLUB

LOCATION
Copenhagen, Denmark

PROJECT TYPE
Swimming Pool and Spa

PRODUCT
Riverstone Brushed & Natural Finishes

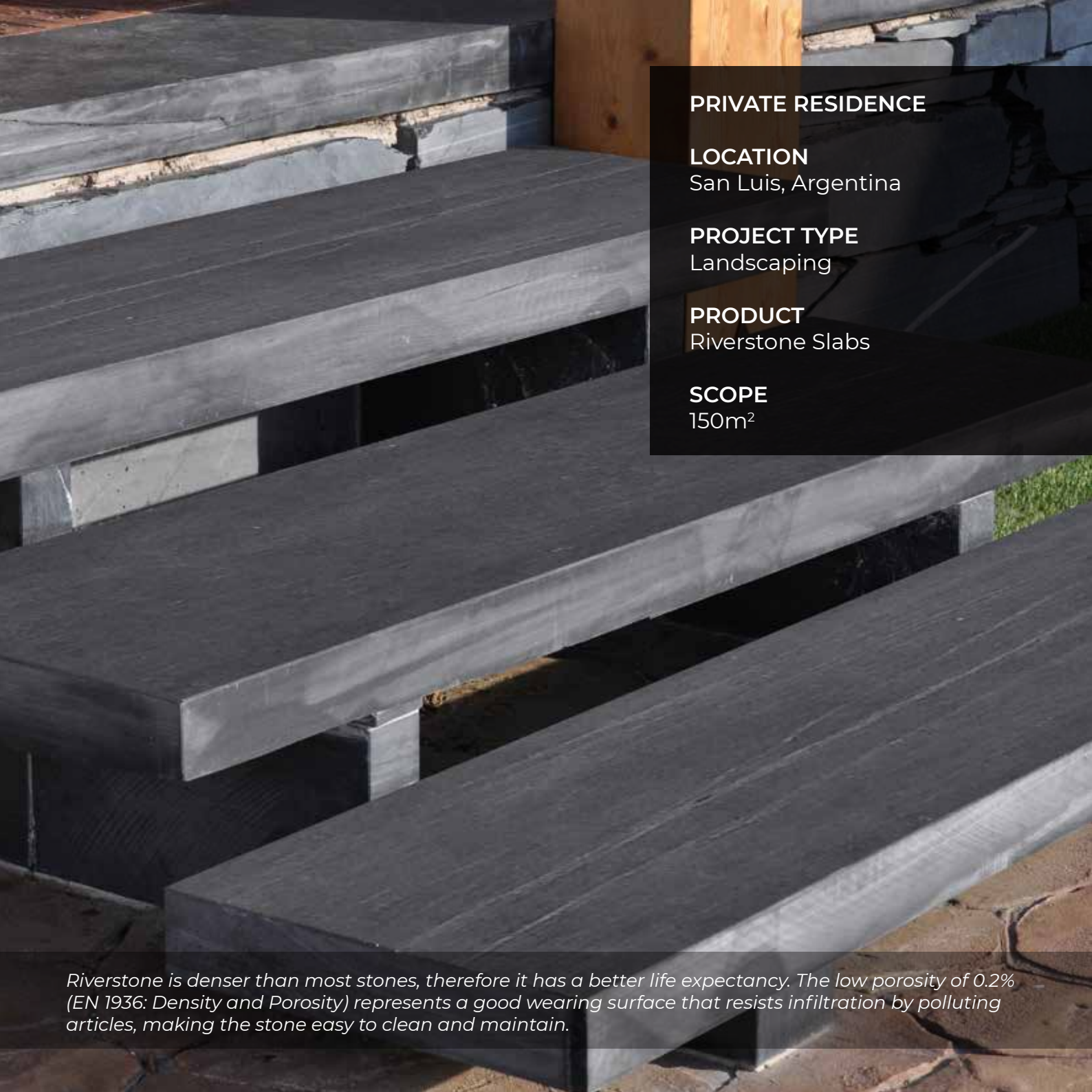
SCOPE
350m^2

Water absorption is a measure of the porosity of a stone and can be an indicator of its susceptibility to damage. The achieved results (EN 13755: Water Absorption at Atmospheric Pressure) are extremely low at 0.2%.

MISCELLANEOUS APPLICATIONS

Phyllite is versatile. The stone can differ in sizes and thicknesses providing an excellent sophisticated touch when used for dramatic feature panels, work surfaces, stairs, fire places or window sills.

Natural stones have been used for centuries to provide an ultra-modern look that is as practical as it is aesthetically pleasing. Riverstone offers the “wow-factor” as the colour and the texture of the stone favourably complement other natural and manufactured materials.



PRIVATE RESIDENCE

LOCATION
San Luis, Argentina

PROJECT TYPE
Landscaping

PRODUCT
Riverstone Slabs

SCOPE
150m^2

Riverstone is denser than most stones, therefore it has a better life expectancy. The low porosity of 0.2% (EN 1936: Density and Porosity) represents a good wearing surface that resists infiltration by polluting articles, making the stone easy to clean and maintain.

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Member of the SSQ Group