09

THE STONE NOTEBOOKS
STONE AND ARCHITECTURE

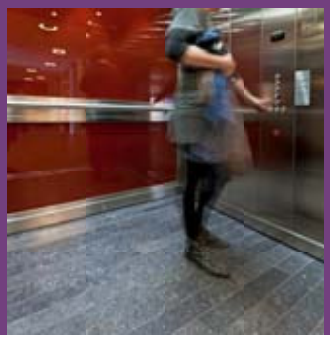
INTERIORS

2 **STAGING FIRE**

Untreated or trimmed, stone wraps the fireplace and lends an atmosphere of wellbeing.

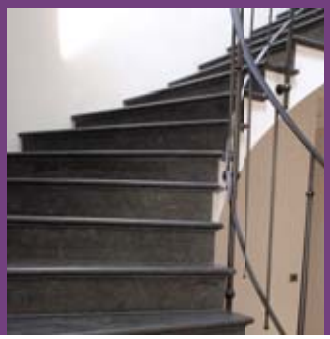
4 **NATURE AT RANDOM**

In the winter garden of a museum, nature creeps indoors as stone gives way.



7 **STYLISH DETAILS**

Indoors, stone can appear in touches, always bringing its natural authenticity.



10 **SARACEN BEWITCHMENT**

The passing on of know-how works wonders : a craftsman of the Compagnons du Devoir bears witness.

12 **STONE, CUT OUT AND CARVED**

Worked by hand, water and laser, stone is an amazing material extensively used in interior decoration.

14 **VERTICAL STONE**

Like a cave with uneven surfaces, a restaurant lines its walls with sandstone blocks.

Natural stone is making a great comeback in homes with a contemporary design. Stone is non polluting, durable, maintainable and sometimes more affordable than in the past and appeals to designers and project owners alike, attracted by stone's timeliness.

Natural stone is a material well suited to its time. It is authentic and conjures up the diversity of the mineral world and, in a certain way, the richness of nature. Because it is never quite the same and, while keeping its essential qualities intact, it gives each construction project its unique character. Because it can easily integrate into a sustainable development approach, today, stone has its place in all building processes; the natural stone of Wallonia does not pollute the environment and the different processing stages consume little energy compared with some other materials used for similar purposes.

Indoors, designers like stone's properties such as stability in time, its unchangeable colours and appearances, its ease of maintenance and its ability to blend into the environment while respecting and enhancing it. The latest progress in stone processing means that natural stone favours original achievements in a good many areas in the home: floors, walls, work surfaces and receptacles, furniture and decoration, whether simplicity or technological complexity are required. Its character and the spirit that it exudes mean that stone is unashamedly trendy and will never go out of fashion.

The warm glow of stone

STAGING FIRE

A wood burning fireplace or stove gives you a sensory experience like no other ! It refocuses home life around the flames and crackling logs. Stone instinctively has its place in what has become a newly found pleasure of today's architecture.

In this wood structure house that opens wide onto the countryside, the architect's office ARTAU wanted the warmth of the fireplace to play a pivotal role when the worst of the winter sets in. It is an insert and not a real open fire which has been installed in a two-face, dry stone wall, around the wood structure.

This wall makes a pair with a second one, similar in appearance, controlling an indoor/outdoor passage. These two sound and stable elements echo to one another, subtending the vast inner space of the apparently light and ethereal house with tranquil assurance.

The job of resizing the rubble stones on site and the wall masonry work, well executed by an experienced firm liaising directly with the quarry, shows the importance of stone trades and the passing on of knowledge in the success of projects where technique and aesthetics are indissociable.

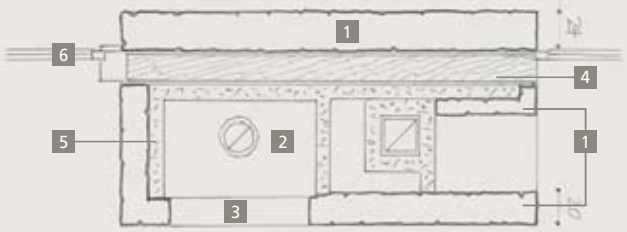
› PRIVATE HOUSE, IZEL, DESIGNED BY ARTAU

STONE

Fontenoille sandy limestone was selected because of the nearby quarry but especially because of its light and warm colour, situated in the range of woods and structures used to build the house. This limestone takes on a sheen of greyish colours with time.

TECHNIQUE

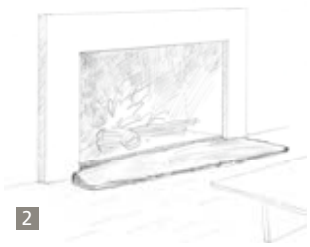
The wall of the fireplace is actually a stone wrapping resembling a dry stone wall. The rubble stones were re-cut on site to enable them to be assembled fairly accurately while keeping a rough appearance. They are laid with narrow and sufficiently deep inner mortar joints to be invisible.



1 sandy limestone wall, 20-24 cm thick
2 insert
3 blue limestone cover strip
4 wood structure
5 masonry made of concrete blocks
6 frame

Stone and flames

Natural stones are among the best heat resistant materials and are a top priority for use in open fires : mantelpieces, jambs and lintels, hearths or hearthstones. Stone is easy to install and adapts to all requirements and to all styles.



1 and 2 Rough, almost wild natural stone is used for a traditional mantel in a Savoyard chalet or as a thin or thicker hearthstone, projecting beyond the hearth.

DESIGNED BY AXEL VERVOORDT

3 Corner mantelpiece made of blue limestone in a renovated thirties house.

DESIGNED BY AABE BRUNO ERPICUM

4 Blue limestone fireplace.

REALISED BY FREDDY CARTON

5 This stove is set into a cleaved blue limestone wall made of rubble stone and is fitted against a rotunda housing the wine cellar staircase.

DESIGNED BY ÉRIC RUMMEL

6 Chimneypiece integrating a fireplace above the floor.

DESIGNED BY LUC SPITS

Where the boundaries of nature and culture meet

NATURE AT RANDOM

Hidden inside an urban cluster, the extension of the Museum of Photography takes root in the orchard of a former Carmelite convent. The winter garden gives new insight into a stimulating relationship between outside landscape and inner gaze.

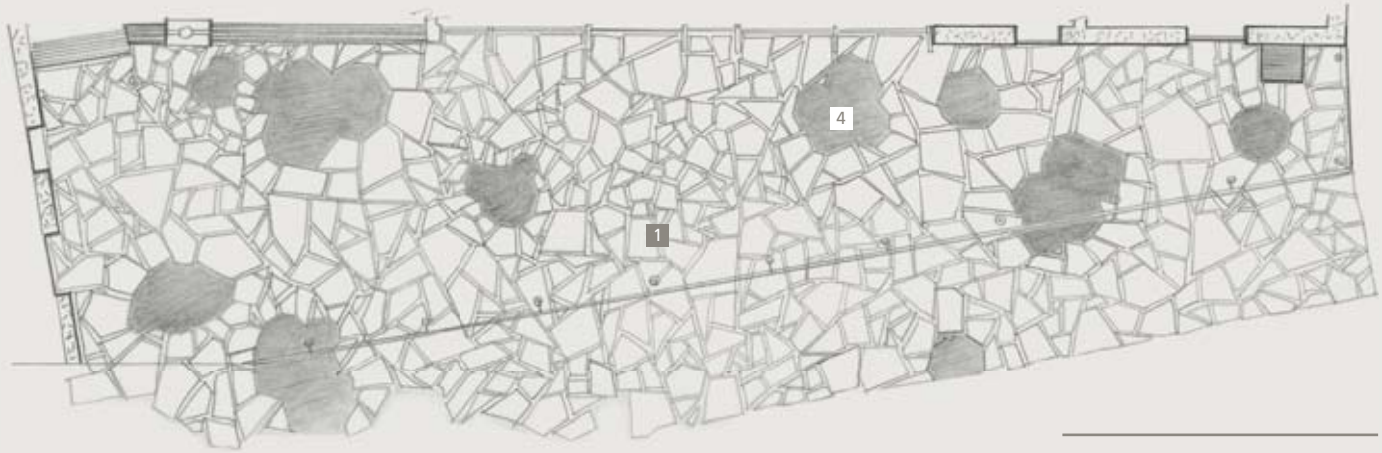
The conversion of this former Carmelite convent into a museum jostled the logic behind the building : the cloistered life of that contemplative religious community cut off from the outside world gives way today to the revelation of the image for society as a whole. The arrangement of the spaces, designed by the architect's office L'Escaut, therefore makes a transition necessary between an outdoors – an orchard and a park, inhabited by remarkable trees, delimited by a surrounding wall and completely open to the light – and an indoors, where precious photos are protected almost in utter darkness.

The extension of this museum, scheduled from the outset of the project but completed late, spreads over a part of the park. It has become a winter garden with a space opening wide onto the landscape and housing a few fruit trees, forming a spatial link with the old orchard. But it is also a place of rest where people can gather, an "in-between", sheltered but with light streaming through its huge picture window. For the floor, the architects chose a concept avoiding any sophistication but contrasting with the rectangular format of the exhibited pictures ; the terrace is laid in opus incertum resulting from the random assembling of off-cuts of natural stone. This laying technique means that informal spaces can be cleared on the floor, where a few apple trees can be planted ready to grow and spread their spring fragrances.

› MUSEUM OF PHOTOGRAPHY, CHARLEROI, DESIGNED BY L'ESCAUT

TECHNIQUE

The winter garden spreads over a part of the old orchard. The flagstones are simply laid on a slightly raised ground and on a thin layer of stabilising sand, both indoors and out. A slight outward slope is given to the space.



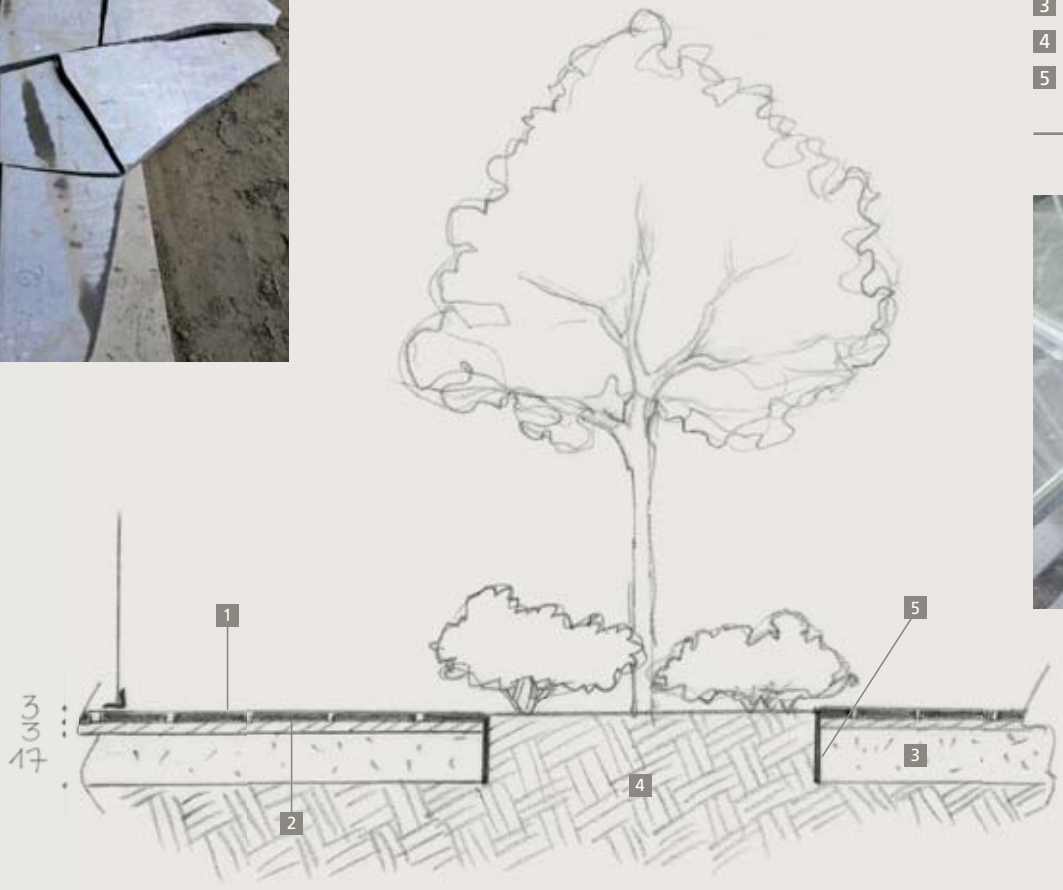
1 blue limestone off-cuts (sawn finish) and mortar joint

2 stabilised sand with consistency of moist earth

3 stabilised sand

4 earth filling

5 flat metal rim



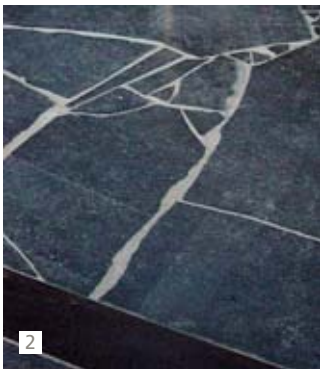
Stone and joint

Natural stones, which can be cut up into broad slabs, are obviously suitable for random bond paving: limestone, some sandstones, schistose sandstone or slate.

The blue limestone, cut into slabs, is broken at the quarry or on site. The joints can then be worked delicately.

1 Here, the onsite cutting work was raised to a maximum with very fine joints. The cutting line is precise. The final rendering is fairly sophisticated: the advantage of this paved floor is the result of the very clear-cut dimensions between large and small stones, which lightens the overall perception.

BLUE LIMESTONE, DESIGNED BY GEERT BUELENS



2 An irregular pattern is made from originally rectangular blue limestone flags. The largest off-cuts are laid on the circumference and in the middle of the space to be paved. The remaining space is filled with smaller pieces. Random bond requires meticulous workmanship on site if the overall aesthetic harmony is to be achieved.

BLUE LIMESTONE, DESIGNED BY GEERT BUELENS

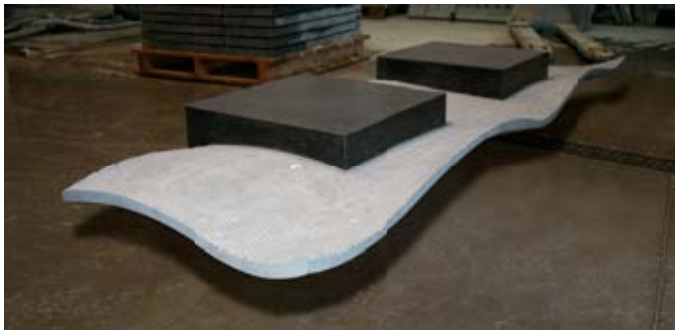
3 SCHISTOSE SANDSTONE, DESIGNED BY ATELIER D'ARCHITECTURE GRONDAL ET ASSOCIÉS

A water table

A slender blue limestone tabletop continues beyond its use as a table, becoming a water table, an indoor fountain creating a light and soft ambiance.

REALISED BY FREDDY CARTON

STYLISH DETAILS



Mineral wave

This bench has been machined using a 3D software program which makes it possible to obtain – almost – all shapes imaginable !

REALISED BY OSCAR DAFFE

A mineral wall

Thanks to this blue limestone crust panel, water seems to gush directly from a natural spring.

DESIGNED BY JOËL COUPEZ

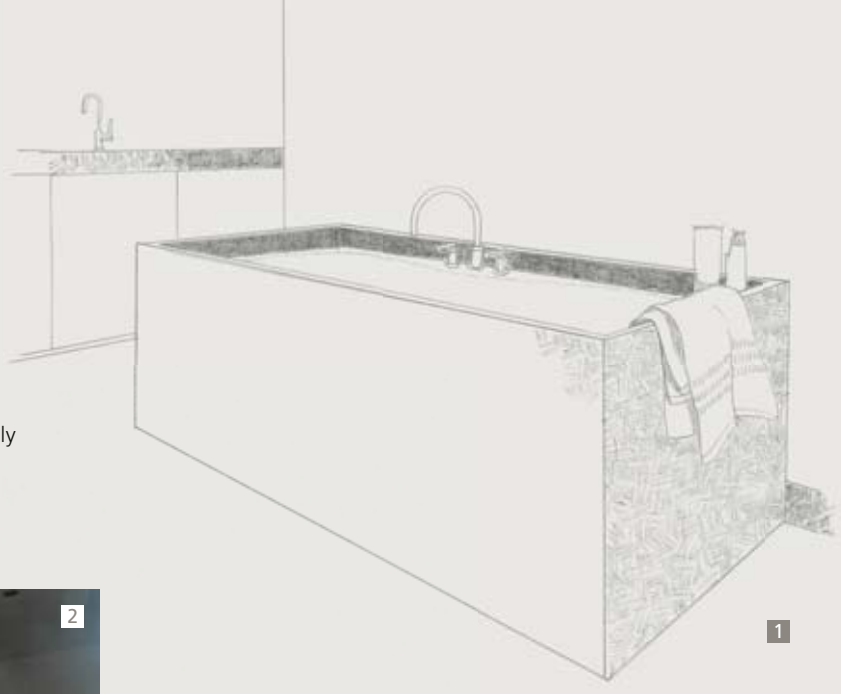
Stone space

In this fitness complex, the rooms are covered with blue limestone from the floor to the ceiling. The wells of light, the recovery of water beneath the floor and very careful finishes make it a space of total wellbeing.

DESIGNED BY JOËL CLAISSE ARCHITECTURES

Stone receptacles

Cut to size, stuck, hollowed and assembled, stone beautifully showcases water.



1

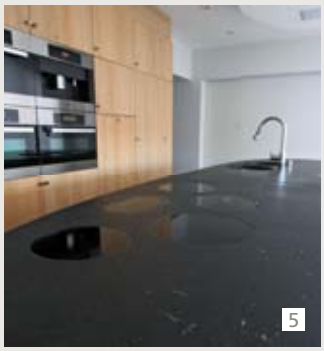
1 BATHTUB SURROUND: A flamed finish was chosen for the long blue limestone slabs. The surface is therefore very slightly uneven, which contrasts well with the actual bathtub and gives a very "nature" look while being easy to maintain.

DESIGNED BY HANS VERSTUYFT ARCHITECTEN

2

2 RUSTIC SINK: Work surface and tubs made of blue limestone.

REALISED BY FREDDY CARTON



5

3

3 A UNIQUELY SIMPLE BASIN: A stone cube used as a basin. The plug is concealed by a slightly sloping plane which makes it an almost mysterious object.

DESIGNED BY LUC SPITS

6

4

4 A NEW LOOK AT AN OLD CLASSIC: Red marble reappears by means of a modernist kitchen.

REALISED BY FREDDY CARTON

5 ACCESSORIES: Slate blends wonderfully into the home for items as varied as work surfaces, shower tubs or sinks.

REALISED BY OSCAR DAFFE

6 RAFRAICHISSOIR: A tub and fountain made of carved stone to refresh or prepare a bouquet or put a few bottles to cool...

SCULPTURE AND DESIGN BY FLORENCE FRESON

Engraved

A few words delicately hollowed out of the stone make this table more than a simple object: a unique and touching work.

DESIGNED BY MICHEL DEYLIUS

Scalped

This surface of re-cut stone blocks lets emerge simple geometrical cut-outs giving it a slightly sophisticated air.

DESIGNED BY JEF MOUTON

In the manner of…

… our traditional architectures: rough stone supporting wooden columns gives them astonishing majesty.

DESIGNED BY AXEL VERVOORDT

Built-in radiator

As a good heat conductor, stone is the ideal material for integrating objects which people often wish to conceal.

REALISED BY FREDDY CARTON

Consistency

The very thin flagstones give the impression that the floor of the hall continues into the lift of this grand hotel in Liège.

DESIGNED BY ÉRIC GOFFIN/PIERRE BRISI

A stone ball

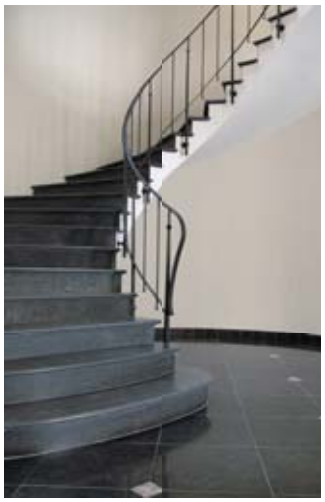
In an austere patio, this bench brings a humorous touch, echoing some boxwood globes. The wooden seating rests delicately on a blue limestone sphere. The latter's base is invisibly embedded into the wood, like the three bronze patina legs.

DESIGNED BY ANNIE BRASSEUR, ATELIERS DEVRAY, CUVELIER, GODEAU

Know-how and long tradition

SARACEN BEWITCHMENT

Imagined over 4,000 years ago by the Sumerians, the technique of the Saracen vault continues to be used in the 21st century, apart from some subtle differences in materials; this stone staircase has many qualities and those qualities are aesthetic, constructive... and economical !



Built by working forward and without scaffolding, the Saracen vault staircase is self-supporting, simply bedded into the wall by its stone steps and risers, to a depth of only 5 cm. The rest is made of bricks and plaster. No shuttering, no foundation, no joints and little upkeep, it can be built anywhere in three days, whether the building is new or being rehabilitated. This little architectural wonder has its followers, notably among the Compagnons du Devoir, a French organisation of craftsmen and artisans, who have a heritage of handing down know-how to future generations.

Jean-Paul Foucher, principal of a higher institute of research and training in stone trades based in Rodez (F), himself a Compagnon du Devoir, regularly takes part in training sessions on this subject, in Belgium in particular. Training often takes place on site and appeals to many professionals, attracted by workmanship that highlights their mastery of real skills and also makes it possible for them to an impeccable job quickly. The contractor is also won over since this stone staircase – blue limestone in this case – adapts to all styles and shapes of step and is less expensive than a wooden staircase made to measure !

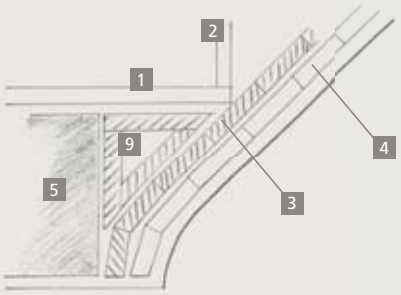
› PRIVATE BUILDING, MONS, DESIGNED AND REALISED BY JEAN-PAUL FOUCHER, CONTRACTOR AGORA, MICHEL DUQUAINE

STONE

Blue limestone and its black honed, satin-smooth finish were specially selected by the architect. Fossils, veins and shells appear on the surface as evidence of the history of the material, bringing life and a certain strangeness to the structure.

TECHNIQUE

The characteristic feature of this construction method is that there is no template and shuttering. The anchor shoe made of hollow bricks is placed first. The risers and steps are laid alternatively one on the other, simply secured in a 5 cm groove made in the wall and plastered from behind using a fast-



setting facing plaster. As the staircase gradually rises, bricks laid in the plaster come and wedge the step/riser assembly. A distribution vault made of brick comes and solidly fastens the staircase ending in a bottom vault, itself smoothed with plaster. The assembling of the bricks is designed in such a way that the overall assembly is self-supporting. The assembling of the steps and risers therefore determines the vault and not the opposite.

The distribution of the steps is the subject of an extremely precise calculation beforehand which further involves a very exact cutting of the stones. This construction method allows a great freedom of shapes and curves. The light and elegant shape of the staircase adapts to all spaces.

1 step
2 riser
3 distribution vault
4 bottom vault

5 anchor shoe under the first step
6 side
7 intrados
8 groove
9 brick and plaster

Light outline

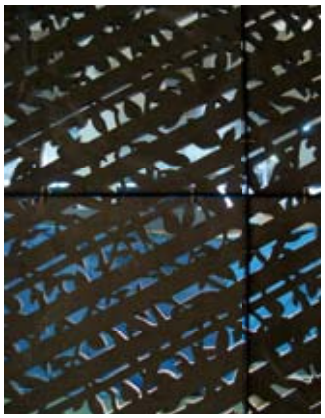
Installed in the context of an old building restoration and extension, these stone steps, recovered from the house, rest one on the other and are pointed with mortar. They are fixed on a central stringer to shift them slightly from the wall.

› PRIVATE DWELLING, AYWIERS, DESIGNED BY JOËL COUPEZ

Hand or laser made

STONE, CUT OUT AND CARVED

Today, the cutting of mineral by hand, water or laser delights designers, who make use of the many properties of natural stone to insert it into the home.



In this stone claustra, a sort of mashrabiya with plant patterns, one can see through without being seen, receive light softly, but also separate a room without placing a wall in it.

Cut out by water jet, a technique more affordable than laser, "stone becomes graphic, weakened and ennobled at one and the same time, by a geometrical pattern drawn from the image of a carved latticework on which a plant might climb", Alice Pilastre relates. Alice is a textile designer curious about materials and the originator of this design measuring one square metre, repeated six times through a subtle horizontal and vertical connection.

Water has hollowed and run through the stone perfectly precisely so that the patterns are accurately in line. The craftsman has managed to do away with the stone frame which generally strengthens the structure ; so gaps have been left around the entire circumference, which leads to a result of great lightness. In that way, we come to a proportion, which is probably a maximum proportion from a technical point of view, of 40 % space and 60 % stone.

The six patterns of this claustra are fixed onto a steel structure designed by Yves Voglaire.

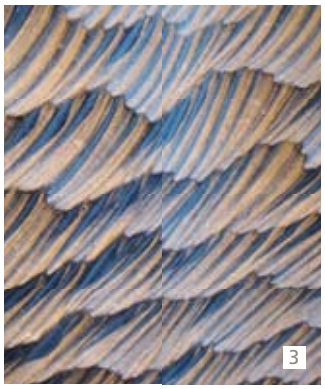
› EXHIBITION STAND, PARIS, DESIGNED BY YVES VOGLAIRE, ORIGINN, & ALICE PILASTRE

1 Mazy Black Marble, also called Fine Black or Belgian Black is quarried in Golzinne nowadays. Its mineralogical composition, made almost solely of calcite, makes it the purest marble in the world. Its extremely fine crystallisation, free from any vein or pattern, makes it possible to obtain an incomparable polish in a marble widely used as flagstones, flat tops, steps, sills, chimneypieces or fine sculpture. In this case, this quality is worked to obtain concave or convex, curved mirrors, reminiscent of curio cabinets.

DESIGNED BY RAFFAELLO GALIOTTO

2 Blue limestone lighting is made by hand and its performance is interesting: the core cutter makes it possible to achieve thicknesses of less than 1 cm and therefore to limit the weight; the weight of the suspensions is less than a kilo. Stone is suitable both indoors and outdoors bringing a sobriety that harmonises with all styles.

DESIGNED BY ALEX DETOURNAY

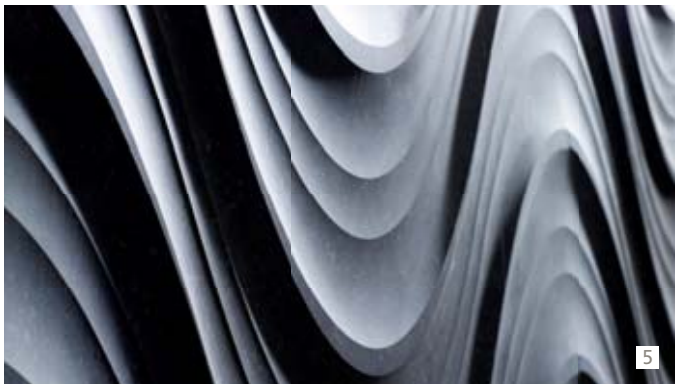


3 Sculpture and blue limestone easily thread their way through the home along intricately engraved floors or sculpted panels.

ARTIST BENOÎT LUYCKX

4 Limestone also allows much more imposing lighting to be made and such lights find pride of place in large living areas. In this case, the blue limestone "organs" measure 1 m long for a diameter of 10 cm.

REALISED BY ANDRÉ CELIS NATUURSTEEN



5 The laser technique adapts to blue limestone, with sunken patterns, which may be coloured or gilded. Certainly a luxury but suitable for simpler applications in the home.

DESIGNED BY LITHOS DESIGN

Like a protective cave

VERTICAL STONE

In the house, the stone walls bind us to our long human history, echoing our cave life, conjuring up our need for safe and solid shelter, rekindling distant memory of our dwelling with the warm and comforting presence of a natural material.

The interior space planning of a restaurant means combining functionality with a visually appealing, customer centric environment conducive to relaxation and entertainment and creating an intimate atmosphere.

The young team of ADN approached this new restaurant interior design project by introducing a link between the three rooms that accommodate customers, one of which looks onto the street. Their choice reflects a unity of colours and the combination of two natural materials : solid oak, for furniture running along the walls of the three rooms and stone, namely Meuse sandstone, showing yellow and brown hues that recall the wood of the benches and tables.

The oblique light from the flush-fitting spots behind the benches slightly dramatises the texture of the walls throwing into "relief" the material effects obtained by meticulous and offset laying of the stones. Bulbs hanging at different heights filter the overall lighting effect to obtain a subdued atmosphere agreeable to tasting and the experience of flavours.

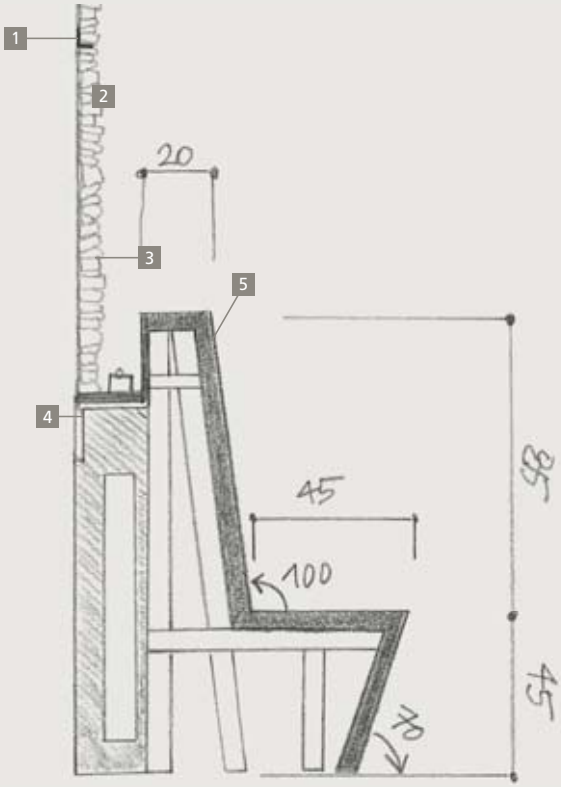
› RESTAURANT, BRUSSELS, DESIGNED BY ADN ARCHITECTURES

STONE

Meuse sandstone was supplied in the form of rubble stone, re-cut on site by a meticulous craftsman, capable of achieving fairly small sizes, all different, laid so as to have a very uneven surface, enhanced by oblique lighting.

TECHNIQUE

The bonding of this internal dividing wall is an assembly of stones adjusted on the spot and the actual stones are laid on steel angle irons, placed horizontally every metre.
The stone fragments are firstly fixed by adhesive cement and invisibly pointed by adhesive less than 2 mm thick.



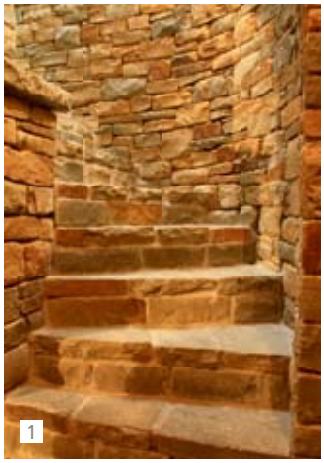
1 intermediate steel angle iron
2 stone fragment
3 joint with adhesive cement
4 L-shaped steel angle iron fixed to the wall by chemical anchoring
5 rough oak bench

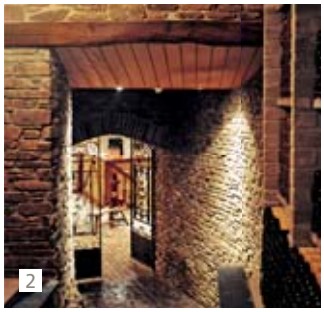
Stone and wine

The thermal inertia of stonework is a quality that is particularly appreciated in the design of a wine cellar. Stone walls contribute to a good stability of the hygrometry of the cellar and hygrometry is further improved by a gravel floor made flush with the ground.

A stone floor – flagstones are an appropriate choice – may be laid around the edges to make it easier to install racks or in the middle of the cellar to make walking more comfortable.

1 CONDROZ SANDSTONE CELLAR



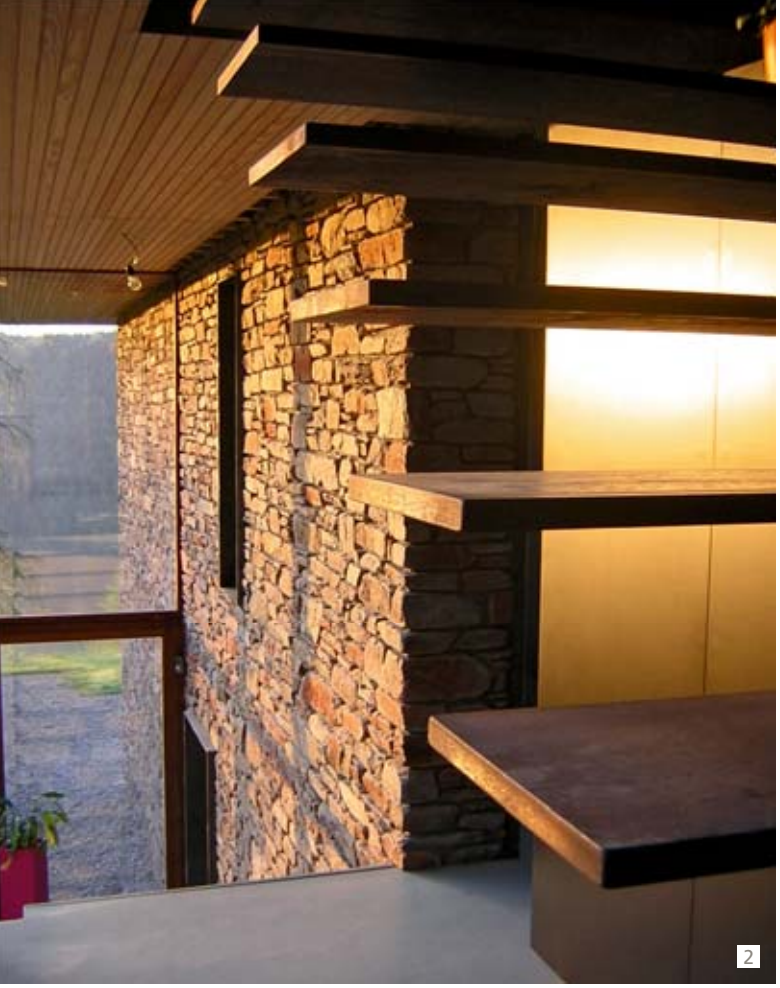


2 SCHISTOSE SANDSTONE CELLAR

Interior wall aesthetics

1 It was a small, brick and stone house which nobody noticed. It has been utterly transformed by the new interplay of volumes and spatial deconstruction and the enhancement of stone.

DESIGNED BY AABE BRUNO ERPICUM

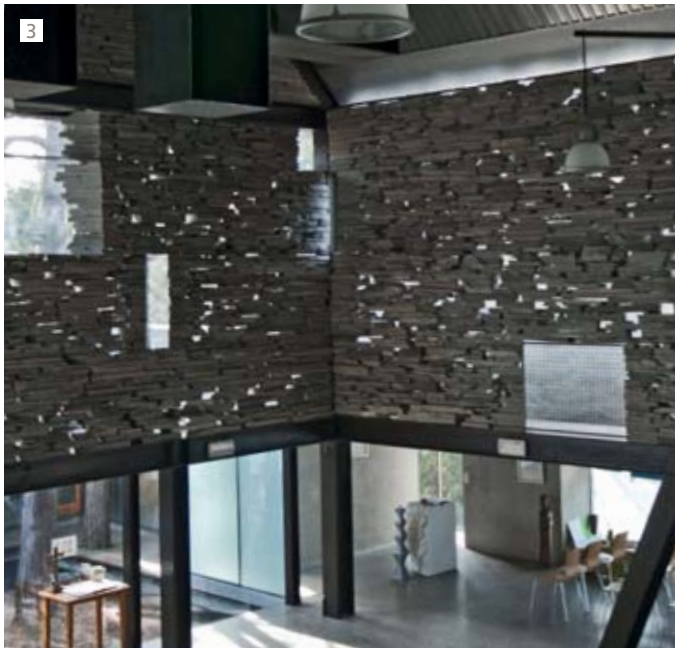


2 Stone and glass, indoors and outdoors: this twofold combination, highlighting the use of stone, often proves to be an interesting way of working materials and opening the house onto its landscape.

DESIGNED BY CRAHAYJAMAIGNE.COM

3 In this church, stone constructs a volume through which the light pours as for an interior stained-glass window.

DESIGNED BY JENSEN & SKODVIN



4 Reminiscent of traditional architecture, the recesses installed in a thick wall release small storage or simply decorative spaces and can enhance a less expressive stone wall.

5 The blue limestone rubble was intentionally cut and laid with a slight offset so as to give an effect of controlled roughness, accentuated by the lighting on the surface of the walls.

DESIGNED BY AGENCE GILLES & BOISSIER, REALISED BY MARMO ARREDO

Glossary

Apron
A protective plate or screen (fireplace, bathtub, etc.).

Basin or Bowl
A container which holds liquids.

Bonding
Way in which rough or hewn stones are arranged.

Cabochon
Small piece of paving decorating a paved floor.

Chamfer
A narrow flat surface of a flattened, jutting edge.

Chimney hood
Start of the chimney shaft or flue, above the mantel.

Chipped
Refers to corners or edges that have been cracked, broken or broken off.

Crust
Natural weathered surface of a layer of rock.

Doorstep / Doorsill
A step in the door recess.

Dry masonry / Dry Stones
Blocks of stone or slabs laid and wedged dry without using any mortar.

Fireplace
A recess at the base of a chimney for burning fuel.

Flamed
Finish obtained through surface scaling by passing a blowtorch over the stone.

Flue
A shaft, tube or pipe used in a chimney.

Landing / Broad step
Platform or half-pace between two flights of stairs.

Layout drawing
The layout drawing is a very accurately dimensioned sketch or drawing indicating how tiles, flagstones, paving and stones are to be laid. The actual notebook contains the layout drawing and the measurements.

Mantelpiece
A frame around the opening of a fireplace, often made of marble, together with its decorative facing.

Mortar
Mixture of binders (plaster, lime, anhydrite, cement, resin, etc.), of a fine aggregate and water, used for sealing purposes.

Newel / Newel post
A piece, usually ornamented, forming the first element of a rail system at the base of the stairs.

Pavement / Flagging
A set of flagstones or paving stones covering a surface, pavement of flagstones or paving stones placed edge to edge in symmetrical pattern.

Paving stone / Flagstone
A slab of stone or marble of a given size, bigger than a tile, number of which are used together for the covering of floors or walls.

Quarter round / Ovolo
A convex moulding having a cross section in the form of a circle or ellipse.

Random bond (Opus incertum)
Assembling of irregular flagstones.

Rough sawn
Smooth in appearance displaying traces and ripples, less than 1 mm offset.

Spiral staircase
A staircase constructed around a central axis.

Spiral staircase without central axis
Helical or curved staircase having no central post.

Stairwell
A vertical shaft or opening that contains a staircase.

Top / Worktop
A flat surface.

Our thanks to the project owners and designers who spared us a little of their time and agreed to be published.

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For 20 years, **PIERRES et MARBRES de WALLONIE** has been disseminating accurate and detailed information about all the facets of natural stone in Wallonia : history, products, traditional and contemporary uses, technical expertise, documentation, restoration.

The **STONE AND ARCHITECTURE** notebooks are intended to be practical discovery tools for architects but also for the general public. Many and varied ways of incorporating natural stone into our surroundings are proposed, drawing on projects implemented in Belgium or abroad and thus presented in a detailed manner to designers.

This notebook is devoted to the indoor use of natural stone, highlighting all the aspects of the **INTERIOR** decoration of the home. It presents achievements chosen for their originality or their classicism, their simplicity or a specific construction detail.

THE STONE NOTEBOOKS
This collection includes notebooks devoted to the garden, to public space and to architecture drawing on specific transversal themes.

STONE IN THE GARDEN
SURFACES I WALLS I STAIRWAYS I WATER I SURFACES 2 I ...

STONE AND PUBLIC SPACE
SURFACES I ...

STONE AND ARCHITECTURE
WALLS I WALLS 2 I **INTERIORS** I ...

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