





## 2 SWEEPING CURVES

A stairway and a water feature work together in a curved array. A spectacular arrangement.



## 4 RAW MATERIALS

In formal parks, stairs are often imposing structures which add scale to broad views. In this re-designed park, a huge stairway offers an understated bridge between the past and contemporary building extensions.



## 6 CONTEMPORARY STEPS

Steps can bring a highly contemporary touch to a garden. The stairway becomes a thing of beauty in itself, set off by the structures and plants surrounding it.



## 8 USING FULL BLOCKS

A very simple way of building steps is to place one block on another. This method can be suited to all styles by varying the raw material and the rock finish.



#### 12 SOFTENED LINES

Stairs become one with the landscape design – or how to reduce the visual impact of a few steps up to the front door.



#### 14 REFLECTING THE LOCAL LANDSCAPE

Our country stairways often look like a series of small terrace-like retaining walls. This solution is very pleasing to the eye and remains timeless.

# 03

## STONE IN THE GARDEN | STAIRWAYS

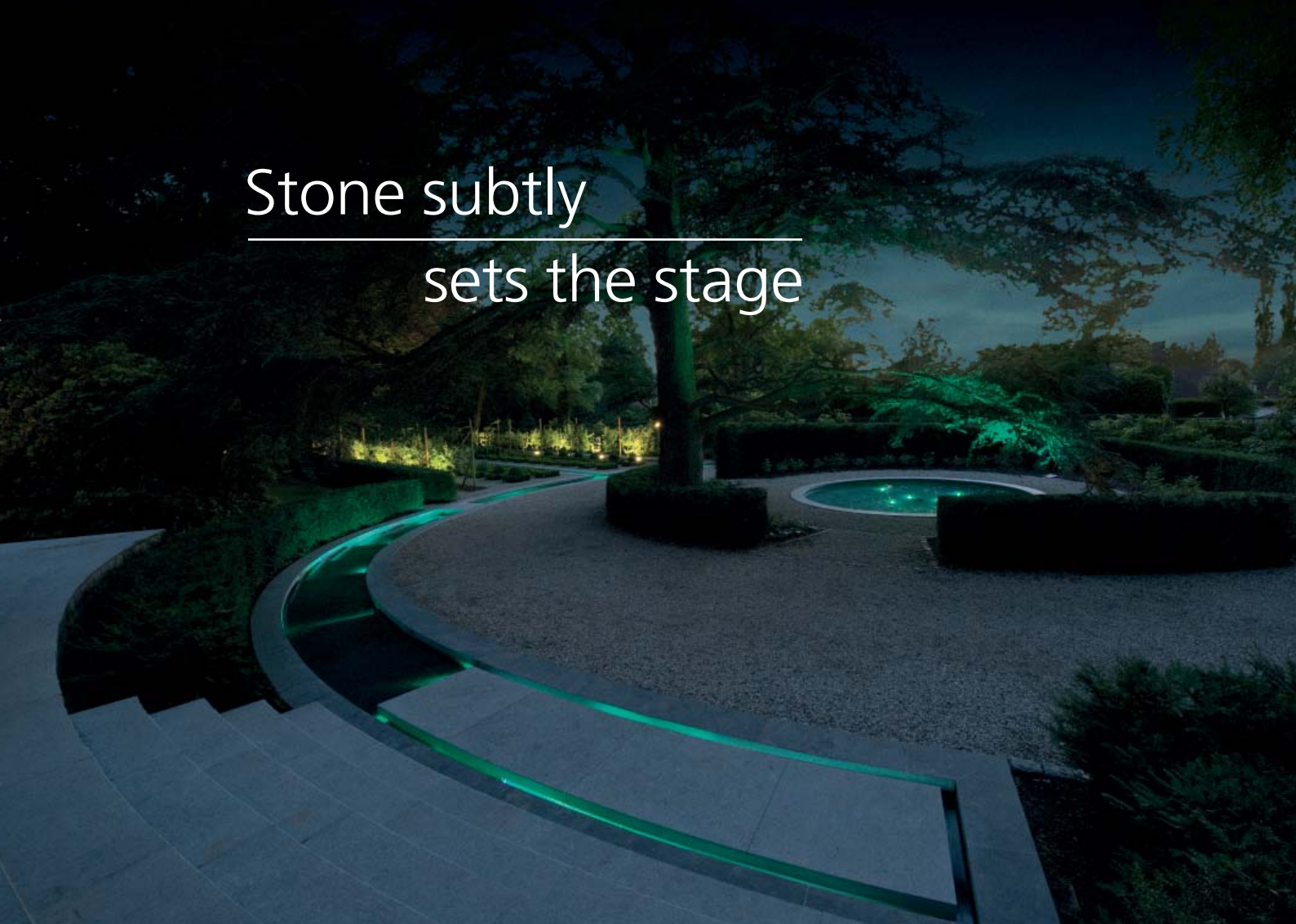
**Steps** give a garden more volume, create separate spaces, open fresh vistas and give a new rhythm to a walk in the garden. The eye rests on the ground for a moment before being swept up to discover fresh scenery above.

There are many excellent reasons for taking extra care with this essential, but often overlooked garden feature. There are a few rules which need to be applied when building a stairway. Each step is holding back ground, frequently in combination with the adjoining wall. Steps therefore need to be solid as well as pleasant to use. Nothing too complicated though.

Although the design needs careful planning, the final structure can come in all sorts of shapes and sizes: it can have a “natural” look or be highly formal, it can be straight or curved, use one or more materials, appear to be hewn from rock or form part of the undergrowth, be highly visible or hidden from view – there are many possibilities.

Natural stone has proved to be ideally suited for all these roles. It delivers the strength and durability required, without hampering freedom of expression. We will go into further detail about the effects which can be achieved in the following pages as we take a look at a number of typical projects which have been completed in Belgium and beyond.

# Stone subtly sets the stage



## SWEEPING CURVES

This garden has been redesigned to bring fresh contours and spaces dramatically framed with stonework.



A garden gets its personality from structures which act in different ways to demarcate spaces, frame views and highlight the effects of light and shade. This garden to the south of Brussels had been largely abandoned to nature as its owners changed over the years, and had to be recreated from scratch to create something special. All that Christophe Spehar wanted to keep was the site's remarkable legacy of magnificent trees. Majestic cedars at the entrance and Corsican pines casting their silhouettes against the sky at the end of the garden provide a superb and truly exceptional setting for staging his creative talents.

Christophe Spehar is particularly fond of powerful, seemingly simple designs which are full of contrasts. He restates the landscape in this garden with a series of banks and slopes with alternating light effects. A unique garden experience lies ahead. A classic stone stairway takes the visitor up to a circular terrace surrounded by an arc of running water. Stone and water come together in a curve accentuated by the shimmering and gentle burbling of the cascades.

➤ PRIVATE GARDEN, WATERLOO, DESIGN BY CHRISTOPHE SPEHAR/IN SITU GARDENS



## STONE

Blue limestone is used here in the traditional method, with slabs 6 cm thick for the cascade levels and 8 cm thick for the wall coverings. The blocks for the steps are 15 cm thick.

## TECHNIQUE

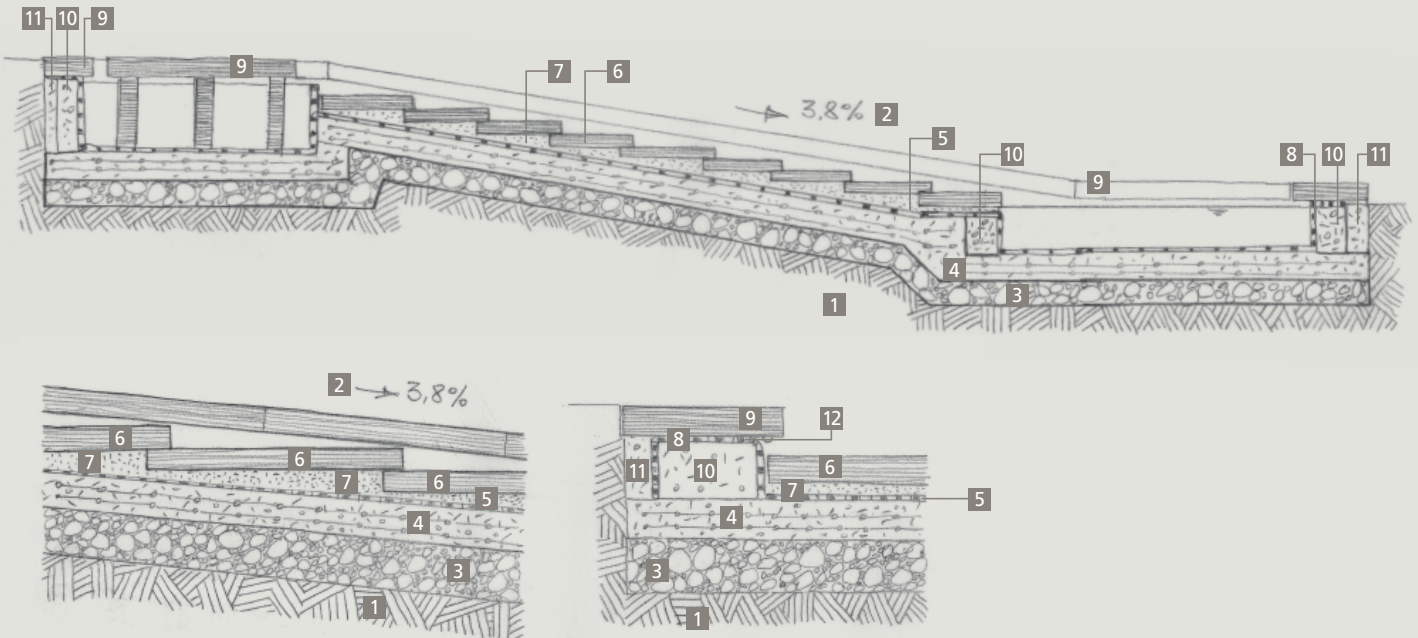
The stairway is made from hewn blue limestone laid on a concrete bedding. The cascade is built on a concrete base covered with a waterproof seal. The blocks are laid so that the top ones rest on the lower ones with a 2 cm overlap. The mortar for the laying surface

provides the foundations for these different levels. The receiving basin at the bottom is formed from concrete blocks topped with stone coping. The floating slab at the top is mounted on small pillars. It hides the high level of the water before it cascades down the steps. This slab

is also used for crossing the cascade, and there is a 10 cm gap between it and the access stairway riser to keep the steps even. LED lighting is installed beneath the copings.

## NOTE

Lighting is often vital for stairways, as the steps need to be used under poor lighting conditions. The layout of the lights must not produce any glare. Fit directional spotlights quite low down in the side wall of the stairway and never let them point directly at the user. The minimum requirement is to have lighting on the top and bottom steps of each flight. It is best to have it all the way up the stairway if possible.



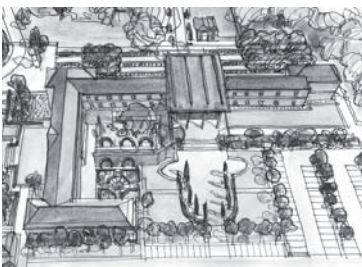
- |  |   |   |
|--|---|---|
| <b>1</b> soil in-situ                          | <b>6</b> blue limestone slab (6 cm thick x 116 cm wide x 165 cm long) | <b>10</b> blue limestone wall covering/coping (8 cm wide x 35 cm wide x min. 100 cm long) |
| <b>2</b> cascade slope                         | <b>7</b> mortar bed (2 cm thick)                                      | <b>11</b> stabilized sand   |
| <b>3</b> ballast for drainage                  | <b>8</b> seal on concrete blocks                                      | <b>12</b> position of LEDs  |
| <b>4</b> reinforced concrete with double rebar | <b>9</b> concrete block (14 x 19 x 29 cm)                             |   |
| <b>5</b> bottom seal                           |   |   |



Simple but effective

## RAW MATERIALS

The restoration of the Château of Val Saint-Lambert involved bringing the grounds back to life as well. Stone played an important part in this project and provided a link between the past and the future.



As well as being a landmark historical site, the chateau also holds a special place in glass-making which continues to this day, and so a contemporary extension has been added to the 18<sup>th</sup>-century buildings. The design of the surrounding park was awarded to Jean Delogne who has aimed to bring these very different buildings together in a composition which takes account of the site's heritage.

He has set out a wide paved area in front of the old chateau with rows of shrubs and perennials. At the back, the outline of the old now-vanished abbey has been re-drawn on the ground. The extension is located on the lower part of the old nave, and the lines of the old choir and transept are marked out with hedges and trees. A stairway the width of the old church stands in the middle of the nave and joins these two areas which are now on different levels. The wooden architecture of the building allows greater freedom and the landscape designer has chosen blue limestone crust as the basic material here. It is an excellent partner for the dolomite gravel and goes particularly well with the vegetation which will grow to full size in the years to come. This huge stairway echoes those installed in 18<sup>th</sup>-century parks, but here, fantasy and nature have their say with an array of levels marked out with large stone crust slabs. The extreme simplicity of the design delights the eye.

➤ CRISTAL PARK, SERAING, DESIGN BY JEAN DELOGNE

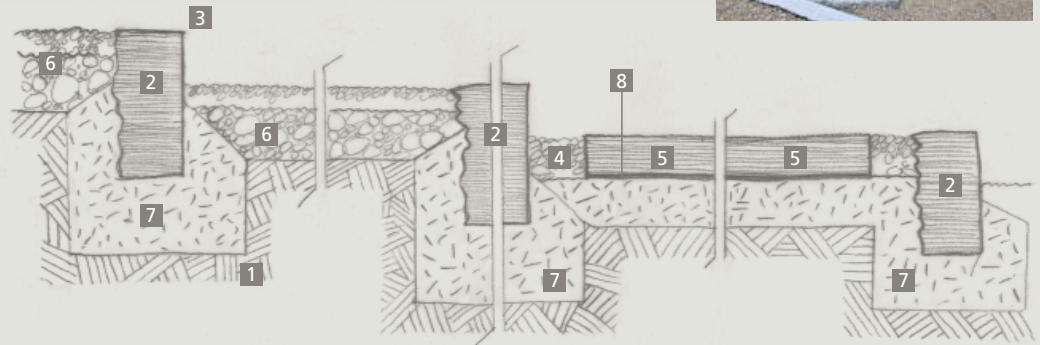
## STONE

Blue limestone is used, complete with its crust. This material is a particular favourite of Jean Delogne. Large slabs are slightly reworked. Very long 1.5-metre edging strips have been sawn to provide even, relatively slip-proof pieces which serve as risers and step nosings. The remainder is left untreated, which provides interesting variations along the dolomite material forming the step itself. Blue limestone crust is used in other places in the park as well as edging material for shrubberies and steps. The surface of the esplanade running along the Meuse side of the chateau is made from Patrimoine paving stones, a specially sized stone which is placed without mortar and treated to have an aged appearance.

## TECHNIQUE

The principle applied is extremely simple and is much the same as the technique used with terraces. The first step is to dig the stairway into the ground. The blue limestone edges are set in the ground with a lean concrete mix to form a 10 cm riser. The step section itself is then filled in with compacted ballast which is then

covered with gravel to a thickness of around 5 cm. Blue limestone crust slabs are set on a bed of stabilized sand before the graded dolomite gravel is applied.



## NOTE

A stairway has to be used where the difference in elevation produces a slope greater than 1 in 10. Stone strips are sufficient for gentler slopes. These make long steps which are very low (less than 10 cm) and are generally long enough for the user to make two paces on them. The step itself may have a slight slope in addition to the 2% required to run off water. Flights of this kind must only have a limited number of steps, because they soon become uncomfortable if they are too long.

- |   |  |
|---|--|
| <p><b>1</b> soil in-situ</p> <p><b>2</b> riser with blue limestone crust edging (untreated face or sawn face)</p> <p><b>3</b> slightly rounded edge</p> <p><b>4</b> gravel (6/14 mm grain size)</p> | <p><b>5</b> blue limestone crust slab (7-8 cm thick and around 1 to 1.20 m in length)</p> <p><b>6</b> ballast or metalling</p> <p><b>7</b> stabilized sand with gravel or thin liquid concrete mix</p> <p><b>8</b> adhesive cement</p> |
|---|--|

## Gentle steps

Low and very long steps catch the light and create shadows that bring a touch of contrast to an often ordinary, gentle slope.

They avoid building a wall while giving a graphic look to a lawn, impart motion to a slope and secure the wheels of a vehicle to make passage safe.



**1** "Tiered" effect for schistose sandstone paving stone levels set above each other to form low steps which can accommodate a vehicle.

CRIE DE SAINT-HUBERT, DESIGN BY ATELIER D'ARCHITECTURE GRONDAL & ASSOCIÉS



**2** Terrace strips in lawns. PRIVATE GARDEN, LASNE



**3** Japanese-inspired step effect on slope, using random paving. VILLA ÎLE-DE-FRANCE, SAINT-JEAN CAP-FERRAT (F), DESIGN BY ACHILLE DUCHÈNE, HAROLD PETO



Pure lines  
for elegant stairway

## CONTEMPORARY STEPS

Stairways in contemporary gardens to match highly-refined architecture: simple shapes, beauty in detail of finish and stone cut without unnecessary flourishes.



Improvements to this white villa included a glass-walled extension on the ground floor and a multi-level fitness room in the basement with access from the garden. Outside steps link these different levels through new outdoor circuits. Their design quietly complements old and new spaces. The stairways are made from blue limestone and adopt an extreme minimalist approach: slabs extend right across each stairway and keep joints out of sight. The feathered joints make it appear that the stairway was hewn from a single block and bestow great elegance on the structure.

The project was recently awarded an architectural prize and owes its beauty to the rhythm of flow and the detail selected at the design stage. Above all though, the overall excellence of execution is attributable to the efforts of a stonemasonry firm renowned for the high-quality of its work.

▶ PRIVATE GARDEN, UCCLE, DESIGN BY JOËL CLAISSE ARCHITECTURES



## STONE

Blue limestone was used for all floor surfaces, including the steps and risers of the stairways. The "clear bed" grade of this material was selected at the quarry to provide maximum contrast with the blue limestone crust used for the walls. The milled finish was obtained with a mechanical grinder leaving a uniform surface covered with very fine circular streaks. This technique was used for the side faces of the stone and can hardly be seen. A chiselled finish was preferred for walking surfaces (20 strikes/dm), as this brought out a contrast between the very light grey chisel marks and the deeper grey of the unworked stone. The chisel marks are spaced at regular intervals and provide an anti-skid surface in the same way as a flamed finish.

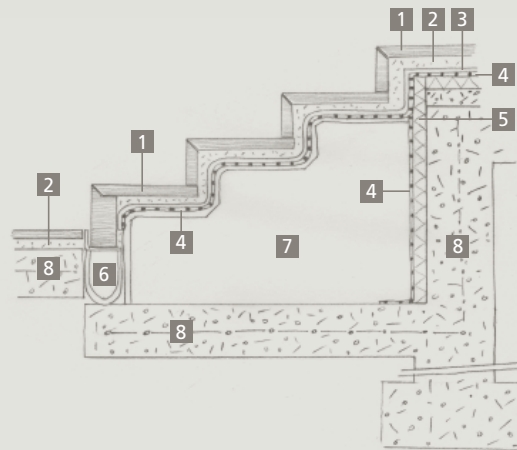


## TECHNIQUE

These stairways were built with a stone facing laid on a concrete base and a seal. Each of the steps or risers is made from a single slab. These slabs are 1.5 metres wide on the steps down to the fitness room. The stones used for the steps and risers are feather-edged so that only a very thin seam can

be seen on the edge. Although the feathered (or mitre-type) method of assembly is pleasing to the eye, it does require meticulous advance planning and extremely precise measurements have to be taken in situ. It also makes this facing somewhat fragile as only a small quantity of stone is used at the

end of the step. It is therefore extremely important to avoid any impact of any kind on the sharp edge of the step. The success of a stairway of this kind depends both on extremely rigorous technical preparation and on excellent stone laying skills.



- 1 blue limestone flags for steps and risers (chiselled finish, 3 cm thick, milled finish on sides)
- 2 fixing mortar
- 3 geotextile sheeting
- 4 seal
- 5 foamglass
- 6 channel
- 7 masonry
- 8 reinforced concrete

## NOTE

The minimum width of a stairway is generally 0.9 m for one person to go up and down comfortably, 1.4 m for two people and 1.8 m for three. Risers always slope out an angle of 2 % in order to promote the flow of water and avoid the possibility of water stagnating on the step.



## In tune with today

The pure outlines of this type of stairway are very pleasing to the eye, and the structure soon takes on a personality of its own – in some respects it's like a piece of sculpture. When it runs along an embankment, the sharp broken lines fit perfectly with softer natural forms when a minimalist approach is applied to these features as well (a closely mown grass is a good example). Installations using the feathered joint method can be extremely fragile, and a way to avoid this is to apply the stone facing with risers which are flush with the step nosing. In this case, very fine joints no more than 2 to 3 mm thick are required, in a shade which is as close as possible to the colour of the stone.

▶ PRIVATE GARDEN, RHODE-SAINT-GENÈSE, DESIGN BY PAUL DEROOSE



## Stone blocks in the undergrowth

# USING FULL BLOCKS

A relatively uncommon but particularly interesting stone was chosen for the steps in order to stay faithful to the design brief: bring the country to town.



The “Promenade Verte” trail runs right the way around Brussels. It takes the route of the old railway line in Auderghem, and occasionally looks right down over the city. There is a staircase at the Avenue du Kouter leading down to the street below.

The aim was to provide a simple and practical structure. The basic design consists of a number of very thick slabs – each the height of a step – laid one on top of another over concrete foundations. The steps were built on the railway embankment; the soil had been reworked and it was not possible to set the steps on stabilized ground. This way of using full blocks to erect a stairway evokes dry-wall steps or tiers of seats in the theatres and arenas of the ancient world.

In this case, this very simple principle is used to highlight the special qualities and the distinct colours of the stone selected: Warche schistose sandstone. This material can take on a variety of appearances and can change considerably, depending on the particular stone or thicknesses used.

▶ “PROMENADE VERTE” TRAIL, AUDERGHEM, DESIGN BY DESSIN ET CONSTRUCTION

## STONE

Schistose sandstone embodies two distinct characteristics. It retains the properties of both sandstone and schist, and is a hard but slightly flaky stone. The shimmering background colours reveal shades from reddish brown to violet, which sparkle slightly and provide a very marked contrast to the dull grey colours of the perpendicular cut. This makes it possible to obtain slabs with very different faces and this characteristic has been exploited to the full in this project.



## TECHNIQUE

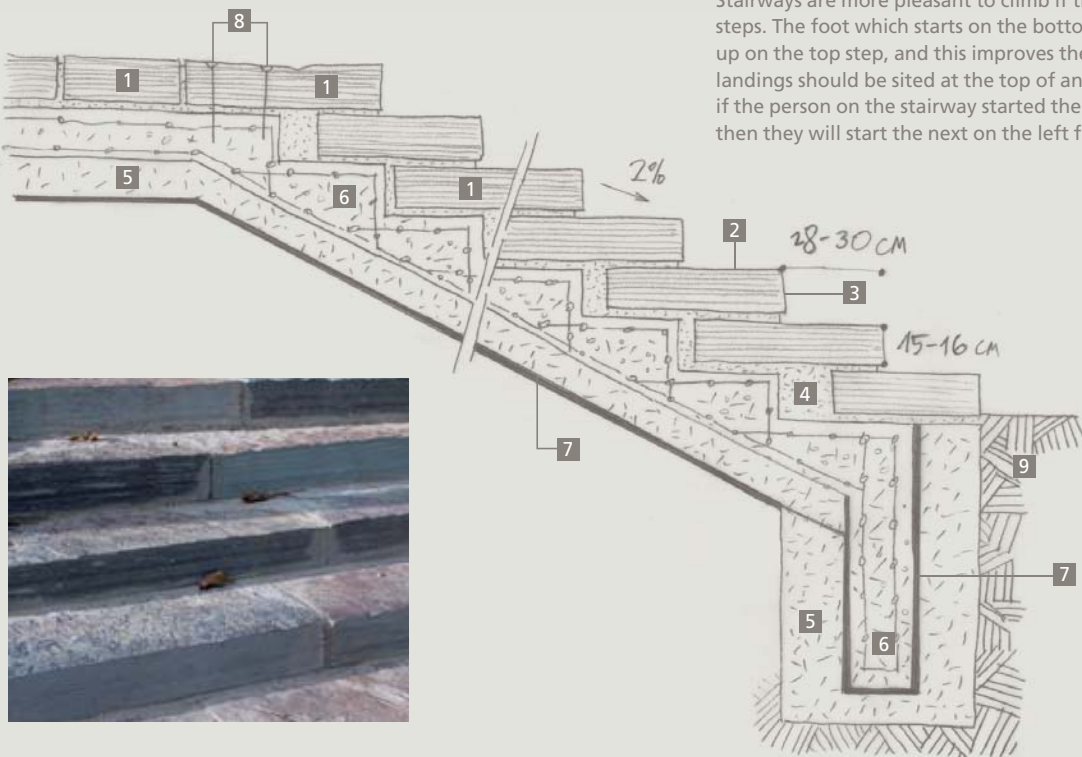
The schistose sandstone steps are 150 cm wide and 14 cm thick, allowing a step height of between 15 and 16 cm including the fixing mortar. The reinforced concrete stair slab rests on stabilized sand

foundations 10 or so centimetres thick. The shuttering for the steps takes account of the variable width of the slabs (min. 45 cm). The stones are laid in the normal way (from the bottom upwards),

and the step at the top is anchored into the concrete stair slab with four stainless steel rods with machined countersunk heads.

## NOTE

Stairways are more pleasant to climb if they have an odd number of steps. The foot which starts on the bottom step is not the one which ends up on the top step, and this improves the balance of the body. Similarly, landings should be sited at the top of an odd number of steps so that if the person on the stairway started the previous flight on the right foot, then they will start the next on the left foot.



- |                                   |                          |                              |                                      |
|-----------------------------------|--------------------------|------------------------------|--------------------------------------|
| <b>1</b> schistose sandstone slab | <b>3</b> riser split     | <b>6</b> reinforced concrete | <b>8</b> stainless steel anchor rods |
| <b>2</b> step cut with a splitter | <b>4</b> fixing mortar   | <b>7</b> geotextile sheeting | <b>9</b> soil in-situ                |
|                                   | <b>5</b> stabilized sand |                              |                                      |



## Casting lines

Stairways can start to get complicated when they are not straight. This one plays with carefully-placed lines to avoid parallels.

Jean Delogne is head landscape designer for this business park near Zaventem airport, which incorporates a lake, fountains, relaxation areas, sculptures and more. Stone is everywhere: the designer exploits contrasts in varying surface textures and makes skilful use of details in the layout. A good example can be found in the blue limestone steps which make the entrance to the Twin Squares park such a clear statement.

The stairway is straight in the centre, but curves in different ways at either end. The structure is formed from thick blue limestone slabs laid on top of each other to realize this concept. The width and shape of the stairway mean that several slabs were needed on each step. The curvature of the stairway is achieved by making each of its steps different. This arrangement avoids joints in protruding sections. The complicated layout extends to the terrace above where slab flooring radiates out from two standing stones at the centre.

► TWIN SQUARES, DIEGEM, DESIGN BY JEAN DELOGNE

### STONE

The blue limestone used here has been cut into slabs 12 cm thick. Faces on the step side have been given a bush-hammer finish. The edge which serves as the riser has been split and catches the light in a completely different way.

### TECHNIQUE

There is a very thick joint between each slab so that each step is seen separately. The most arduous part of this project was arranging the layout and establishing the stone-cutting schedule. The component parts were marked at the quarry so they could be easily installed in situ.





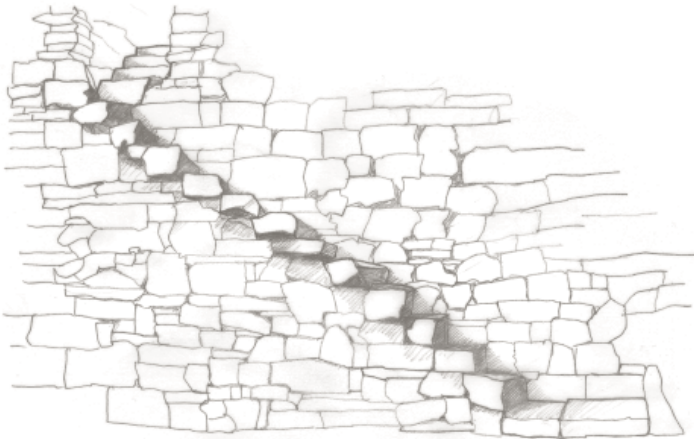
**1** Blue limestone blocks measuring one metre in length are used to provide a clearly-defined transition from one garden level to another. PRIVATE GARDEN, TIELT, DESIGN BY CHRIS GHYSELEN

## Tricks of the trade



**4** One way of producing a stairway with only a few steps is to install the blocks vertically. In this case, the joints have to be made using a water-resistant mortar.

PRIVATE GARDEN, WESTERLO, DESIGN BY FRANCIS BROOS

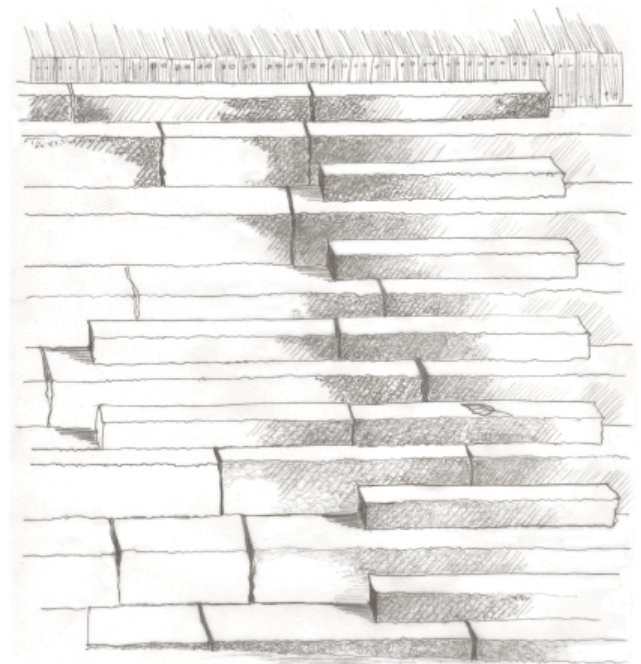


**2** Blocks are often used to form steps along dry stone walls.



**3** The stairway shown here starts with sawn blue limestone with blue limestone crusts taking over halfway up to mark a change in style between two adjoining areas.

PRIVATE GARDEN, HAUT-ITTRE, DESIGN BY JEAN DELOGNE



**5** Mixture of block sizes used for a giant stairway which also provides room to sit down.

PROMENADE CHAMPLAIN, QUÉBEC (CA), DESIGN BY DAOUST LESTAGE/ WILLIAMS ASSELIN ACKAOU



## Stairs become one with the landscape design

### SOFTENED LINES

If space allows, you can give your garden a tiered effect and fit the steps on a succession of levels so avoiding the need for a stringer to support the steps.



This entrance stairway combines standard step design with terrace wall sections sunk in the garden structure. It not intended to be too imposing, as this would have detracted from the symmetry of the facade of the house. Francis Broos uses the gentle slope at the front of the house to fit his stairway into the landscape and beckon us through to the garden beyond. The parking and garage area is isolated behind a wall of greenery.

Blue limestone edging marks out a series of small but clearly-defined terraces which are home to a variety of ground cover and shrubs. Conventional steps lead up to the front door in a succession of steps of uniform width, except for a slight indentation at the point where a box hedge runs across the slope. The overall design is very precise, but the ground cover extends a small way over the blue limestone surfaces to make the structure appear gentler and provide a more welcoming approach than a more standard stairway would have done.

▶ PRIVATE GARDEN, RIDDERKERK (NL), DESIGN BY FRANCIS BROOS



## STONE

The terrace wall sections, steps and risers are made from light-coloured flamed blue limestone. The pieces are relatively large. The steps and landings are all made from a single piece right the way across. The terrace sections can be up to as long as 2.36 m, and are all 30 cm high and 5 cm thick throughout. The slabs for the steps are 3 cm thick.

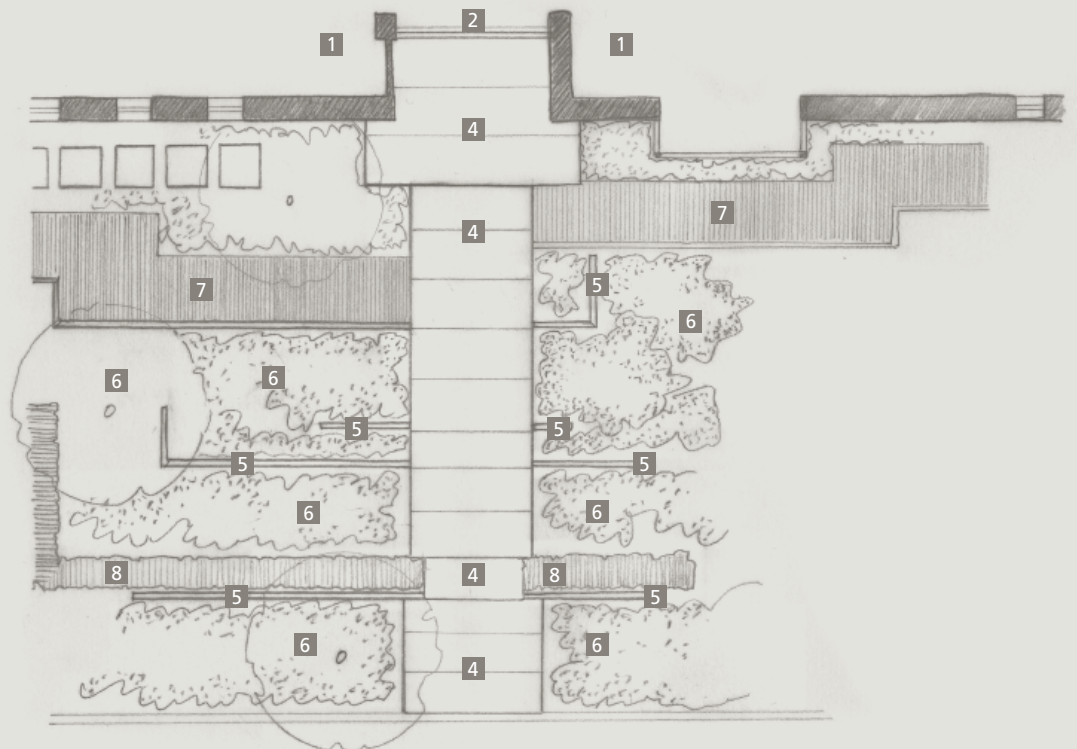
## TECHNIQUE

The terrace sections are laid first in a bed of lean concrete. They meet at the middle of the stairway. There is a slight cut-out for the steps so that they can fit in at half

their height and allow the nosing to protrude. The steps themselves are fixed to their reinforced concrete base with mortar.

## NOTE

The step nosing should not protrude any further than 1 to 2 cm. It can be re-worked underneath to add a drip channel which forces drops of water to fall down, rather than run along the face of the step or seep into the joint.



- |                    |  |   |
|--------------------|--|---|
| <b>1</b> house     | <b>4</b> landing beyond pavement                           | <b>7</b> paved path running across stairway |
| <b>2</b> door sill | <b>5</b> bevelled-edged terrace wall sections (5 cm thick) | <b>8</b> box hedge                          |
| <b>3</b> pavement  | <b>6</b> vegetation  |   |



## Stone hugs the valley walls

# REFLECTING THE LOCAL LANDSCAPE

Masonry steps can blend in with the features of the local stone. Application of few simple rules and a bit of care can produce great results.



This property nestles in a hollow in a valley in the Ardennes, and the garden used to surround a beautiful old house. Some walls were already there. A few years back, Hughes Fernet was commissioned to enlarge the garden and design a variety of different areas running down to the bottom of the valley. Several flights of steps were needed.

The same design principles were applied to all of them: they were all to be made from the local schist. This is a grey anthracite stone which sets off ferns, mosses and perennials particularly well, so Hughes Fernet left some places for these plants to gradually move in to the structures. The steps are narrow on the way down to the valley and move up and down with the contours of the ground to fit in with landscape.

A few steps near the house are fitted between two dry stone walls and break up the straight lines they create. A few metres away, a flight of steps offers a close view of a magnificent stone gable. Further on, a small trickle of water flows down a few steps to a schist basin. The stairs create separate levels and add rhythm to the garden by dividing it attractively into a number of different spaces to discover.

► PRIVATE GARDEN, CUGNON, DESIGN BY HUGHES FERNET/LE BOUILLON BLANC



## STONE

Schist is first and foremost a stone of the Ardennes. It comes from several different deposits, each offering a variety of colour and compactness. The rock comes in thin plates with a flaky appearance. It is produced in relatively thin rubble stone which are suitable for erecting building and dry-stone walls, as well as large slabs for making one-piece steps and are much sought-after as they look good and are practical for use. These slabs are delivered sawn in the widths specified by the customer, while the depth is left unworked at around one metre.



## TECHNIQUE

These types of masonry stairways are built by cutting out the soil in situ, providing a stable base and then working from the bottom upwards. Once the route for the steps has been accurately marked out on the ground, the threshold slab is laid on a thin concrete foundation. The first riser is fitted against a low wall and rests on the threshold slab. The stones are

joined together with cement, leaving spaces to allow plants to take root. The cement work is for setting the risers at a constant height using stones in a variety of sizes. The next step is made from a large slab, which is also set at a slight angle of around 2% to let water run off. The foundations are made of stabilized sand (200 kg/m<sup>3</sup>) around 10 cm deep on a 5 to

10 cm layer of ballast. The stone is set on the foundation with adhesive mortar. A low wall is then built on this step at the height needed to make the stairway comfortable. This wall serves as the second riser, and the process is repeated for the rest of the stairway. Angles and levels must be checked constantly.

## NOTE

This method of construction is not suitable if the stairway is to be located on poor ground or on fill soil. A reinforced concrete foundation must be used in these cases. Outside step height is between 12 and 15 cm, and may be as much as 17 cm for a flight of several steps. An intermediate landing is often added if the flight has more than 12 or so steps. A "magic" formula can be used to ensure that a stairway is comfortable. Known as the "Blondel formula", after the French architect François Blondel who devised it in 1675, it provides a means of determining the correct ratio between the various components of the stairway:  $2H$  (riser height) +  $G$  (going) = length of pace (between 60 and 65 cm depending on the slope required).



- |                              |   |  |  |                          |
|------------------------------|---|--|--|--------------------------|
| <b>1</b> soil in situ        | <b>3</b> riser made from schist rubble stones | <b>5</b> step consisting of a single schist slab (4-5 cm thick and around 1 m long) at a slope of 2% | <b>6</b> stabilized sand or thin liquid concrete mix | <b>7</b> adhesive cement |
| <b>2</b> slope of the ground | <b>4</b> ballast (grain size: 2/32 mm)        |  |  | <b>8</b> threshold slab  |



## Variety of shapes

Straight or curved, gradually overgrown with moss and perennials which have settled and made it their own territory, these steps are becoming more and more closely integrated into the garden surrounding them as time goes by.

**1** The stringer on this stairway is made from large schist slabs set vertically. The uneven size of the stones produces an original effect.

PRIVATE GARDEN, MOGIMONT, DESIGN BY HUGHES FERNET/  
LE BOUILLON BLANC



**3** This old stairway rests against a tall terrace wall in the municipality of Vielsalm. The wall and the stairway form a whole and boast beautiful stonework.

PRIVATE GARDEN, VIELSALM



**2** The contemporary feel of the abbey gardens is achieved using very light-coloured Fontenoille sandy limestone for the low walls, wide edges and masonry steps which structure this part of the garden.

ROUGE-CLOÎTRE ABBEY, AUDERGHEM, DESIGN BY JNC INTERNATIONAL

# Lexicon

## Ballast

Gravel mix used for sub-base. Ballast improves drainage and has grain size between 2 and 32 mm.

## Balustrade

Assembly consisting of handrail and balusters designed to provide protection against falling (banisters or railing).

## Flight

Series of steps between two landings.

## Going

Horizontal distance between two step nosings.

## Landing

Platform placed between two flights of steps.

## Plinth

Flat rectangular decorative member placed at the bottom of a wall or partition.

## Rise

The height of a flight of steps from floor area to floor area (for example from the ground-floor lawn to an overhanging terrace).

## Rise height per step

Distance between two successive step treads.

## Riser

Vertical part between two steps. The riser adds safety, although it may not be included in some contemporary steps.

## Space requirements

Overall dimensions of steps as viewed from above.

## Stair slab

Sloping reinforced concrete foundation supporting the steps of a flight. It is subsequently covered with facing slabs.

## Step

Horizontal part on which the foot is placed. The dimensions associated with the step are the width of the tread, the going distance and the rise height.

## Stringer

A skirting supporting the ends of steps in a staircase.

## Tread width

Distance between the two stringers.

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

**Dominique Guerrier Dubarle** is an agricultural engineer, specialising in the history of gardens and landscape. Sensitive to the constantly renewed work of yesterday's and today's designers, she shares her personal way of seeing recent achievements that highlight stone, her favourite material.

**Cristina Marchi** is a building archaeologist, specialising in heritage, its know-how and in heightening awareness about history and architecture. She is attentive to the "stone people" revealed through words and pictures to create wanted or unexpected links.



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**With the**

This notebook is devoted to the use of stone for **STAIRWAYS**. It is the fruit of attentive meetings, warm visits and lingering looks at the gardens surrounding us and presents achievements chosen for their originality or their classicism, their simplicity or a specific construction detail. Works of landscape designers who like to share their creative outbursts or their experiences, they invite us, above all, to step in and enjoy garden tales.

The collection **STONE IN THE GARDEN** is intended to be a practical discovery tool for garden architects and landscape designers but also for the simple garden lover. Many and varied ways of incorporating stone into the realm of the garden are proposed on the basis of projects implemented by Belgian landscape designers and presented in a detailed manner.

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

STONE IN THE GARDEN  
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