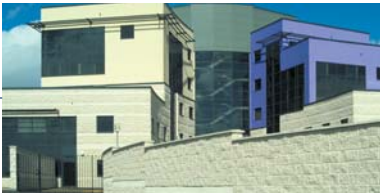




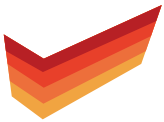
Millennium  
Masonry



Ballidon Split and Shot Blast



Project Lyng Centre for Health and Social Care West Bromwich  
 Architect Panton Sargent Ltd  
 Contractor AWG Construction Ltd



**Besblock**

*combining colour and texture*

# Besblock Ltd - The Company

For over 25 years, we at Besblock have been carefully selecting natural materials in order to provide masonry blocks that maintain consistency in strength, durability and colour. As a family-owned business, we like to exceed our clients' expectations in both the expertise and the quality of our fast and flexible service.

We pride ourselves on using the best available manufacturing equipment, thus ensuring that we consistently supply superior products. All our manufacturing units employ American Columbia block-making machinery, which is world renowned for producing the best possible concrete masonry and particularly emphasises dimensional accuracy.

We not only believe in sound environmental practices: we use them. All our blocks are cured naturally in specially designed chambers by harnessing the heat generated from the cement hydration process; this has the dual positive effects of maintaining accurate colour consistency in our masonry, and of producing a harder, more durable block. We thus avoid the colour bleaching and case hardening of the product that can often result from accelerated curing processes.



Our two state-of-the-art plants are situated in Telford, Shropshire, at the heart of Britain's road system. Since we use our own transport fleet for all deliveries, we are able to ensure that orders will arrive on time no matter where clients are situated in Great Britain.

## What is Millennium Masonry?

Millennium Masonry is a range of facing blocks manufactured in regular shapes from selected natural quarried aggregates. It is therefore very resistant to inclement weather, offering durability equal to that of dense clay bricks. It has the considerable advantage of containing a built-in water inhibitor, thus virtually eliminating the emission of unsightly lime bloom and efflorescence. Millennium Masonry is recommended for both internal and external walling applications.

The face size of 440mm long x 215mm high renders Millennium Masonry particularly suitable for larger buildings, as there are only 9.88 masonry blocks to the square metre when laid, compared with a figure of 60 units of brick per square metre of walling. The effect is to make larger wall areas appear clean, smooth and uncluttered. Significant savings in both mortar and laying costs are also an inherent part of using Millennium Masonry. For example, current rates suggest that laying one square metre of bricks can cost up to 60 percent more than masonry blocks, and in addition bricks will require approximately 37 percent extra mortar per square metre.

Members of National Home Energy Rating



Membership No. 0538



Available width range from 75mm to 215mm in Smooth and Shot Blast, and in Split are 100mm and 140mm. Many machine-cast blocks are available for special applications, and in addition a sophisticated cutting and bonding process can create most bespoke shapes. Our technical team will advise clients on how special design features relating to facing masonry can be accommodated in the most economical fashion without compromising quality.

Although some iron oxide colourfast pigments are introduced to create the stronger colours, experience has shown that the most popular colours requested by clients are the pastel shades (white through to creams, beiges or buffs). We are able to create these colours by blending the natural aggregates without the addition of pigment, and we believe that masonry manufactured in this way will age and mature more naturally than products containing pigments.

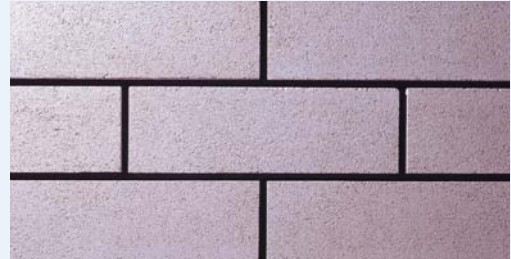
Millennium Masonry is produced on American Columbia block-manufacturing presses. These precision machines are acclaimed as the world's best for masonry production, with particular emphasis on consistency in the quality and dimensional accuracy of the resulting products.

Rigorous quality control standards are enforced at every stage of the manufacturing process, with even the aggregates being constantly measured and monitored to ensure that batched volumes remain unchanged, and our products maintain highly consistent colour shades and textures.

To summarise: our commitment is to ensure that our clients achieve complete success with every project.

Millennium Masonry is available in three contrasting textures and several colours, giving designers plenty of scope for expression in the embellishment of their buildings.

The textures are:



Smooth

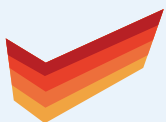


Shot Blast



Split

*Photographs above show our new face size of 440mm long x 140mm high, applicable to 140mm solid blocks only.*



**Besblock**

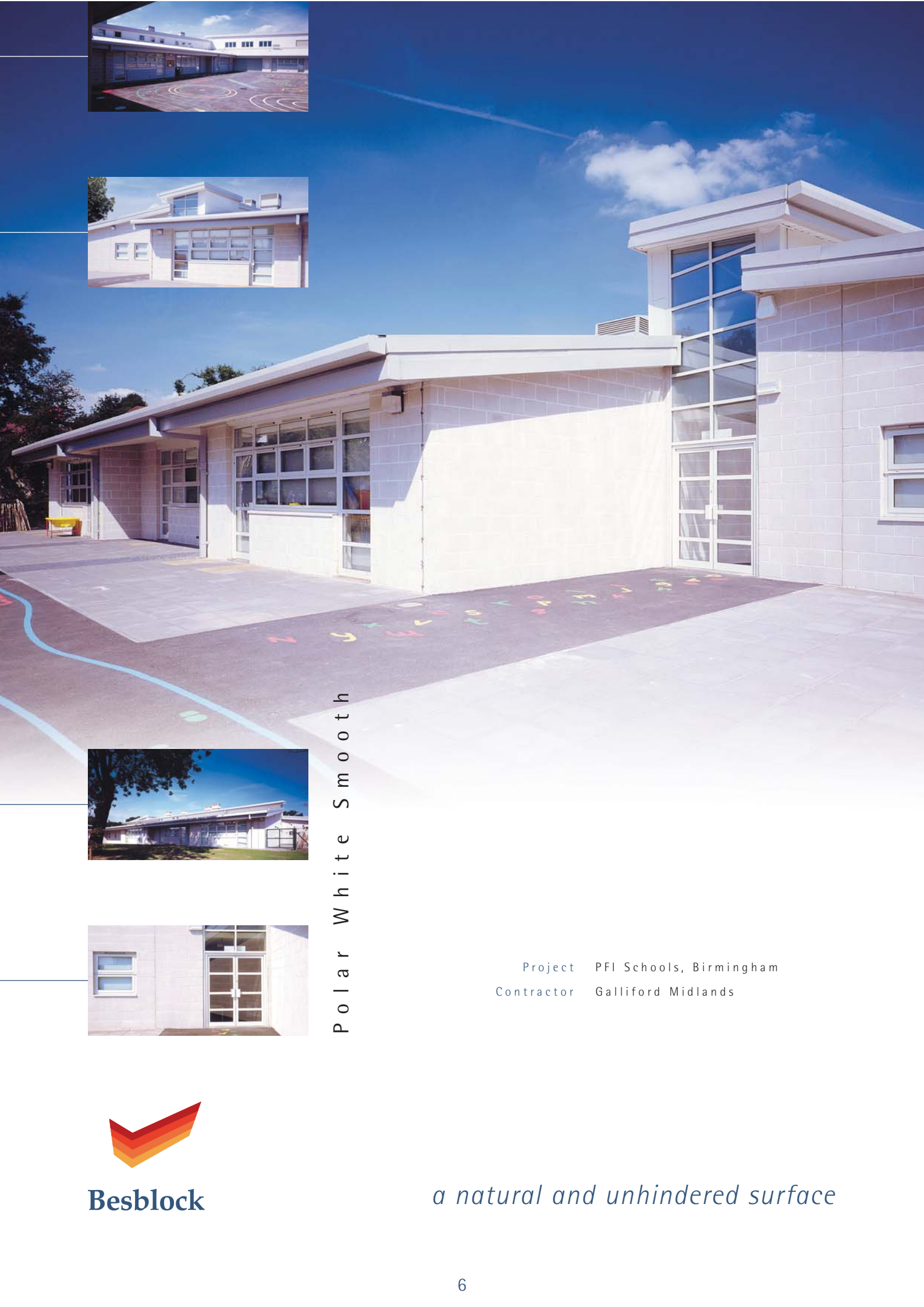
Project Inlet Facility Derby Water Treatment Works  
Architect Marchant Cole Associates  
Contractor North Midland Construction

# Millennium Masonry

*aesthetically pleasing*

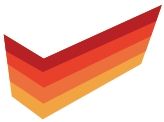
Costwold Smooth and Horcott Shingle Split





Polar White Smooth

Project PFI Schools, Birmingham  
Contractor Galliford Midlands



**Besblock**

*a natural and unhindered surface*

# Smooth

Fine, precise and durable, Millennium Masonry's Smooth facing block can be used externally or internally to create large, natural, unhindered surfaces. Smooth facing masonry allows the designer to confidently combine different colours to create either traditional or modern designs at reasonable cost. The Smooth masonry block can be placed perfectly alongside other textured blocks and materials, creating clean architectural compositions.

## Standards

Millennium Architectural Facing Masonry is manufactured in accordance with BS EN 771-3:2003 Category 1. Quality control standards are monitored with great care, beginning with the receipt of the specially selected aggregates, and continuing throughout manufacture and during the natural curing process. The manufacturing process is governed by an independently certified quality assurance scheme.

## Smooth Masonry Block Sizes

Face size: 440 x 215mm.

Widths: 75mm, 90mm, 100mm, 140mm, 150mm, 190mm, 200mm, 215mm.

Types Available: 75mm to 150mm available in Cellular or Solid; 190mm to 215mm available in Solid or Hollow.

Face size: 440mm x 140mm.

Width and type: 140mm, Solid only.

Strengths: Cellular blocks, 7N and 10.5N. Hollow blocks, 3.5N and 7.0N. Solid blocks, 14N to 21N.

## Special Shapes and Sizes

Smooth facing masonry is also available in a standard range of machine-cast special shapes. (See pages 22-23 for detailed illustrations.) Using sophisticated cutting and bonding methods, other more specialised shapes and sizes can be created from the standard rectangular units to suit clients' individual needs.

Please contact our technical services team, who can provide working solutions for all your requirements. (See page 26.)



## Smooth Facing Masonry Colour Range

Millennium Smooth facing masonry is available in six attractive colours to blend effectively with most environments and materials. However, the colours available in this range are fewer than for the other textures. This is because in all pigmented concrete the colouring agent does not physically change the colour of the aggregate particles, but rather it coats them. Using colouring pigments in masonry blocks with such smooth, flat surfaces can therefore render them susceptible to scuffing, especially when strong colours are employed.

Manufacturing from natural quarried aggregates means that seam changes within the quarry could cause minor shade variations in the finished product.

To ensure the best possible consistency of colour and texture, therefore, orders are normally manufactured in one production batch where possible.

## Water Absorption

When tested in accordance with BS 3921 the average water absorption recorded for Millennium Masonry is 5.2 % compared with 9.7% for a typical clay facing brick. Test certificates are available upon request.

# Millennium Masonry

# Shot Blast

The Shot Blast facing masonry block has a subtle surface that gives the appearance of natural erosion and weathering. This beautiful matt texture is created by a shot-blasting process that exposes the aggregate and softens the colour, whilst still maintaining a flat surface. Millennium Masonry's Shot Blast range can be used on its own to add unique character, texture and depth to wall areas in both external and internal applications. Alternatively, the highly versatile Shot Blast style can be combined with Smooth or Split facing masonry or other materials to create contrasting surfaces and colours.

## Standards

Millennium Architectural Facing Masonry is manufactured in accordance with BS EN 771-3:2003 Category 1. Quality control standards are monitored with great care, beginning with the receipt of the specially selected aggregates, and continuing throughout manufacture and during the natural curing process. The manufacturing process is governed by an independently certified quality assurance scheme.

## Shot Blast Masonry Block Sizes

Face size: 440 x 215mm.

Widths: 75mm, 90mm, 100mm, 140mm, 150mm, 190mm, 200mm, 215mm.

Types Available: 75mm to 150mm available in Cellular or Solid; 190mm to 215mm available in Solid or Hollow.

Face size: 440mm x 140mm.

Width and type: 140mm, Solid only.

Strengths: Cellular blocks, 7N and 10.5N. Hollow blocks, 3.5N and 7.0N. Solid blocks, 14N to 21N.

## Special Shapes and Sizes

Shot Blast facing masonry is also available in a standard range of machine-cast special shapes. (See pages 22-23 for detailed illustrations.) Using sophisticated cutting and bonding methods, other more specialised shapes and sizes can be created from the standard rectangular units to suit clients' individual needs.



Arizona



Dorset Green



Ballidon



Iced Diamond



Charcoal



Parchment



Coral



Polar White



Cotswold



Sandstone



Cumberland Stone



Silver Grey



York

## Shot Blast Facing Masonry Colour Range

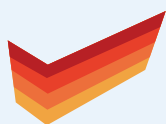
The even texture is obtained by passing the coloured or natural product through a sophisticated blasting machine. In addition to applying the texture, this process removes the surface cement paste from the face, revealing the natural beauty of the aggregate. In the case of a pigmented block, much of the face pigmentation is removed; this softens the colour, which appears then to come from within the block. For this reason the product is much less susceptible to scuffing, and so a wider range of colours is possible than for the Smooth face range.

Manufacturing from natural quarried aggregates means that seam changes within the quarry could cause minor shade variations in the finished product.

To ensure the best possible consistency of colour and texture, therefore, orders are normally manufactured in one production batch where possible.

## Water Absorption

When tested in accordance with BS 3921 the average water absorption recorded for Millennium Masonry is 5.2 % compared with 9.7% for a typical clay facing brick. Test certificates are available upon request.



**Besblock**



*adding unique character*

Project New Clinical Sciences Building,  
Walsgrave Hospital, Coventry  
Architect Nightingale Associates,  
Roath, Cardiff  
Contractor Skanska

# Millennium Masonry

B  
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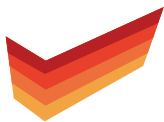


Iced Diamond Split

Project New Trust Offices,  
Wrekin Housing Trust

Architect Tweedale Limited

Contractor Henry Boot Construction (UK) Ltd



**Besblock**

*a heavily textured and individual surface*

# Split

Machine-cast, reconstituted stone blocks are individually split to create a face that emulates the timeless beauty of hand-hewn stone. Each piece is unique and its irregular texture allows the designer to express warmth and beauty, but with inherent durability and strength. We use a sophisticated, four-way block splitter rather than a standard guillotine process, making the splits regular and avoiding unsightly, over-emphasised contours from concave to convex within the face plane. The feeling of strength created by the rustic, uneven texture of the face is enhanced by the block's precise, chamfered arrises. The chamfer helps to prevent mortar deposits from becoming embedded in the face texture. Split faced masonry can be used with Smooth faced masonry, or with materials such as metal and tiling, to enhance designs while remaining economical.

## Standards

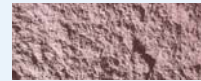
Millennium Architectural Facing Masonry is manufactured in accordance with BS EN 771-3:2003 Category 1. Quality control standards are monitored with great care, beginning with the receipt of the specially selected aggregates, and continuing throughout manufacture and during the natural curing process. The manufacturing process is governed by an independently certified quality assurance scheme.

*All colours shown have been reproduced as accurately as printing will allow. For more accurate colour information please request samples.*

## Split Facing Masonry Colour Range

The irregular face texture of this range gives it a very low susceptibility to scuffing, and therefore it is available in a wide range of 15 appealing colours.

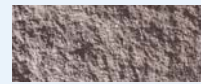
The splitting process actually breaks the aggregate particles, thus revealing their inner beauty and colour, and so it creates the possibility of adding to the block's face a decorative flecking which contrasts with its base colour. For example, the addition of a mixture of black basalt and red gravel to a green pigmented mix will give the block a striking appearance when split. The creative possibilities are endless, and we will be pleased to make suggestions to meet our clients' particular needs.



Arizona



Ballidon



Charcoal



Coral



Cotswold



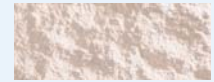
Cumberland Stone



Dorset Green



Dorset Green



Iced Diamond



Nantgarw



Parchment



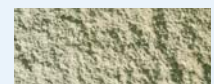
Polar White



Sandstone



Silver Grey



York

Manufacturing from natural quarried aggregates means that seam changes within the quarry could cause minor shade variations in the finished product. The irregular contours of the face surface of the Split face block, however, make any such variations almost impossible to detect. Nevertheless, to ensure the best possible consistency of colour and texture, orders are normally manufactured in one production batch where possible.

## Water Absorption

When tested in accordance with BS 3921 the average water absorption recorded for Millennium Masonry is 5.2 % compared with 9.7% for a typical clay facing brick. Test certificates are available upon request.

# Millennium Masonry

# Design Details



**Good design detail.**  
Shows full quoin block return into doorway recess.



**Good design detail.**  
Shows full quoin block return into window recess. Block abutting window glass.



**Bad design detail.**  
A cut block slip is used for the corner return. Detail is both untidy, and unsightly.



**Bad design detail.**  
The ex machine smooth finish of the split faced block has been returned into the recesses. The split faced block could have been ordered with one end shot blasted to add texture to the return face.



**Good design detail.**  
The block has been ordered with one face and one end shot blasted, to accommodate the exposed end in the recess.



**Good design detail.**  
The split faced block has been ordered with one end shot blasted to add texture to the exposed end return into the window recess.



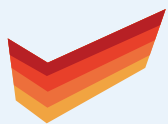
Split faced trough lintel blocks on face  
*(note: cut and bonded joint at 45° trough lintel block)*



Split faced trough lintel blocks face and soffit  
*(note: cut and bonded joint at 45° trough lintel block)*



Split faced trough lintel blocks face and soffit  
*(note: cut and bonded joint at 45° trough lintel block)*



**Besblock**

Project St. Mary's School  
Architect Mitchell Harvey Partners  
Contractor Bluestone plc

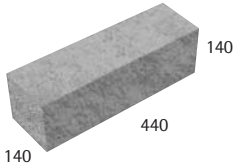
# Millennium Masonry

*combining colour and texture*

Dorset Green Split and Shot Blast



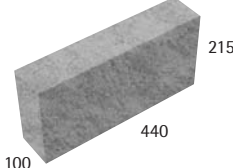
## Split face size 440mm x 215mm standard blocks



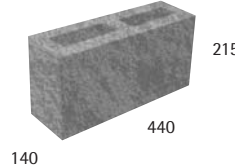
140mm Split Sub 20Kg	
Order Ref:	14M2
Unit Weight Kg	18
Laid Weight Kg/M2	278
Thermal Resistance m <sup>2</sup> K/W	0.10



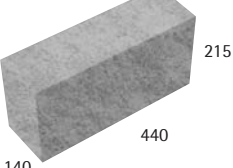
100mm Cellular Metric Split	
Order Ref:	1MC
Unit Weight Kg	16.16
Laid Weight Kg/M2	170.4
Thermal Resistance m <sup>2</sup> K/W	0.122



Metric Split	
Order Ref:	1M
Unit Weight Kg	19
Laid Weight Kg/LM	199
Thermal Resistance m <sup>2</sup> K/W	0.071



140mm Cellular Metric Split	
Order Ref:	14MC
Unit Weight Kg	18.5
Laid Weight Kg/M2	199.26
Thermal Resistance m <sup>2</sup> K/W	0.208



Metric Split	
Order Ref:	14M
Unit Weight Kg	28
Laid Weight Kg/LM	278
Thermal Resistance m <sup>2</sup> K/W	0.10

### Split Masonry Block Sizes

Face Size: 440mm x 215mm.

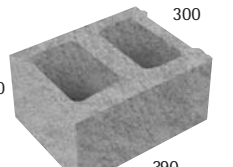
Widths available: 100mm and 140mm.

\*Face size: 440mm x 140mm.

Width: 140mm.

*All weights quoted are approximate and may vary due to moisture content and weather conditions. All sizes shown are in mm.*

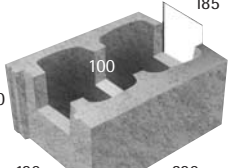
## Split face size 390 x 190mm modular blocks



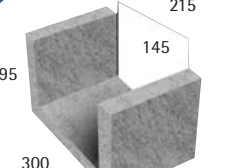
Modular Split	
Order Ref:	3M
Unit Weight Kg	24
Thermal Resistance m <sup>2</sup> K/W	0.214
Vol Void:	0.0103m <sup>3</sup>



Modular Split End Corner	
Order Ref:	3MC
Unit Weight Kg	17
Vol Void:	0.0065m <sup>3</sup>

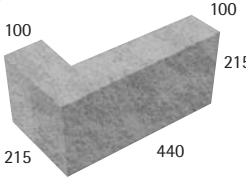


Modular Ring Beam Unit	
Order Ref:	3MRB
Unit Weight Kg	19
Laid Weight Kg/LM	299



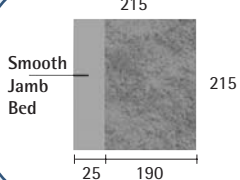
Modular Lintel Unit	
Order Ref:	3ML
Unit Weight Kg	8
Laid Weight Kg/LM	299

# Split face size 440 x 215mm machine-cast special application blocks



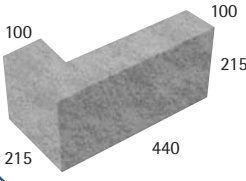
**Metric Split Window Return Full**

Order Ref:	1MR
Unit Weight Kg	25
Thermal Resistance m <sup>2</sup> K/W	0.071



**Split Window Return Face Detail**

Order Ref:	1MRH
Unit Weight Kg	15



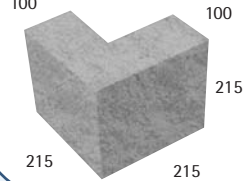
**Metric Split Quoin**

Order Ref:	1MQ
Unit Weight Kg	25
Thermal Resistance m <sup>2</sup> K/W	0.071



**140mm Split Quoin**

Order Ref:	14MQ
Unit Weight Kg	33
Thermal Resistance m <sup>2</sup> K/W	0.10



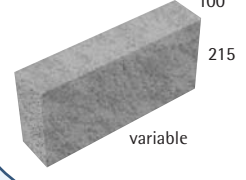
**Metric Split Window Return Half**

Order Ref:	1MRH
Unit Weight Kg	15
Thermal Resistance m <sup>2</sup> K/W	0.071



**140mm Split End Corner Sub 20Kg**

Order Ref:	14M2V
Unit Weight Kg	variable
Thermal Resistance m <sup>2</sup> K/W	0.10



**Metric Split End Corner**

Order Ref:	1MV
Unit Weight Kg	variable
Thermal Resistance m <sup>2</sup> K/W	0.071



**140mm Split End Corner**

Order Ref:	14MV
Unit Weight Kg	variable
Thermal Resistance m <sup>2</sup> K/W	0.10



**100mm Lintel Unit**

Order Ref:	1ML
Unit Weight Kg	12
Laid Weight Kg/LM	26



**140mm Lintel Unit**

Order Ref:	14ML
Unit Weight Kg	15
Laid Weight Kg/LM	35

## Special Shapes and Sizes

Owing to the nature of the splitting process, machine-cast special blocks are limited to shapes having flat face surfaces, e.g. quoin blocks and the like. (Detailed illustrations on this page.) Using sophisticated cutting and bonding methods, other more specialised shapes and sizes can be created from the standard rectangular units to suit clients' individual needs.

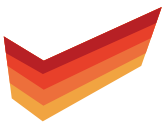
*Please contact our technical services team, who can provide working solutions for all your requirements.*



Parchment Smooth and Split

Project Days Inn Hotel, Leicester  
Forest East Services  
M1 Northbound

Architect JWA Architects Limited  
Contractor Volumetric Limited



**Besblock**

*a natural and unhindered surface*



adding unique character

Project Showcase Cinema,  
Nantgarw  
Architect Abbey Holford Rowe  
Contractor OCCI Limited

Nantgarw Matrix Split

# Millennium Masonry



## Special Shapes and Sizes



*Illustration shows cut and bonded split faced 45° quoin, and quoin trough lintel blocks.*

Standard machine-cast blocks, in all textures, are produced in face size 440mm x 215mm and in various widths, with the exception of the new 440mm x 140mm size developed to meet the HSE single-person lift weight restriction. Blocks of this face size are available in all three textures, but at 140mm width in Solid format only. (See Health and Safety requirements on page 30).

Standard widths available at 440mm x 215mm face size for Smooth and Shot Blast textures are shown on page 19, and for Split textures on page 14-15.

Should our existing range of machine-cast walling blocks not meet your requirements, special moulds can be manufactured to order. For example, the 390mm x 190mm x 300mm hollow block shown on page 19 was designed and developed exclusively for National Amusements' Showcase Cinemas.

The illustrations on pages 22-23 detail machine-cast, special application blocks available in Smooth and Shot Blast textures. Note, though, that the nature of the splitting process does limit the special shapes available in this range to units of rectangular shape with a plane face surface – for example, quoin blocks and window return blocks.

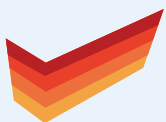
However, virtually any special shape (limited only by the blocks' face size and width) can be cut from the machine-cast blocks. In addition, our sophisticated cutting and bonding process enables more specialised shapes and sizes to be created to meet clients' individual, bespoke needs. It should be noted that due to the cutting process, where a mechanically sawn surface is visible, its surface texture will differ to that of the Split or Shot Blast. Under these circumstances, sawn surfaces can be textured by means of needle gunning or shot blasting.

### Special note about on-site cutting

We recommend that any cutting of masonry blocks is done at our factory, where the cutting equipment automatically cleans the block with fresh water during the cutting process.

The cutting blade of most on-site masonry saws is lubricated and cooled by water, which is often re-circulating. This mixes with the dust created by the cutting process to form a dirty cementitious slurry which will be invisible until the block is dry, when it will show and give the appearance of efflorescence. No amount of cleaning will then remove the stain.

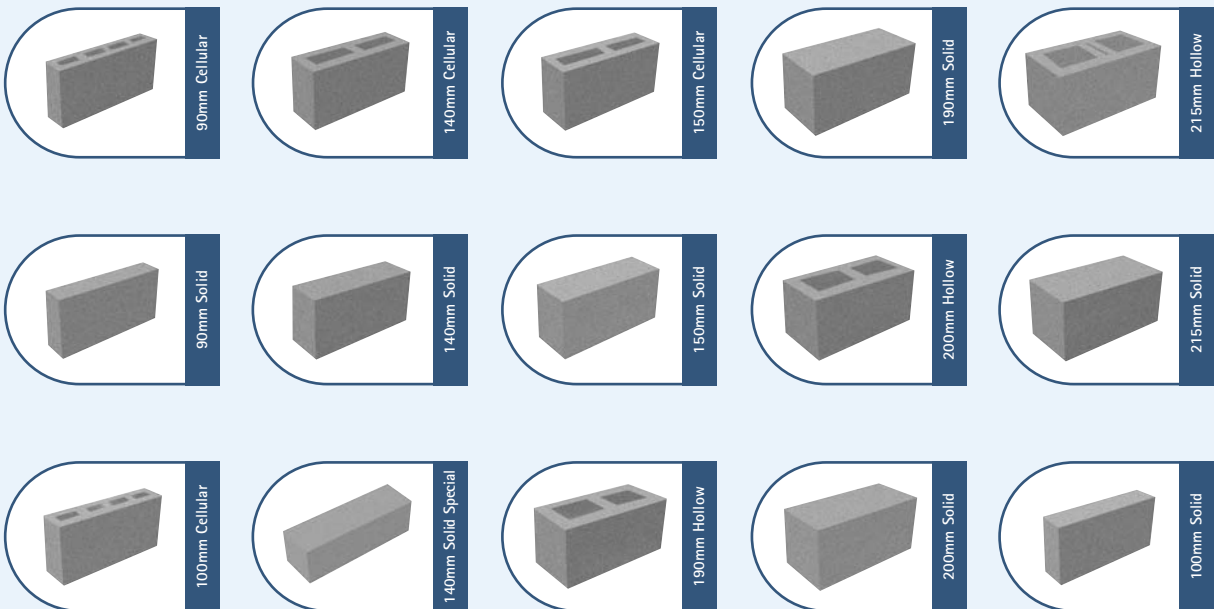
Our commitment is to ensure that our clients achieve complete success with every project. To this end, we consider it a vital part of our service to work closely with them at the design stage, so that we can advise how any special design features relating to the blocks can be accommodated in the most efficient and cost-effective way.



**Besblock**

# Smooth and Shot Blast face size 440mm x 215mm standard blocks

Description	Order ref. smooth	Order ref. shot blast	Thermal resistance m <sup>2</sup> K/W	Unit weight Kg	Laid weight Kg/m <sup>2</sup>
90mm Cellular	9MC	9MCT	0.098	13.75	146.42
90mm Solid	9MS	9MST	0.064	17.03	178.81
100mm Cellular	1MCS	1MCT	0.109	14.98	159.76
100mm Solid	1MS	1MST	0.071	18.92	198.67
140mm Cellular	14MCS	14MCT	0.159	18.95	203.68
140mm Solid	14MS	14MST	0.100	26.49	278.15
140mm Special	14MS2	14MS2T	0.100	17.25	277.46
150mm Cellular	15MC	15MCT	0.165	18.74	202.81
150mm Solid	15MS	15MST	0.107	28.38	298.01
190mm Hollow	19MH	19MHT	0.186	23.29	240.87
190mm Solid	19MS	19MST	0.136	36.95	377.48
215mm Hollow	3MH	3MHT	0.186	24.44	253.51
215mm Solid	3MS	3MST	0.153	40.68	427.16
200mm Hollow	2MH	2MHT	0.174	24.06	249.25
200mm Solid	2MS	2MST	0.142	37.84	397.35



All weights quoted are approximate and may vary due to moisture content and weather conditions.



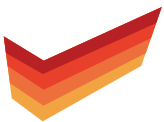
Parchment Smooth and Split

Project Seedamm Centre in Pfaffikon, Switzerland

Architect Haskoll Limited London U.K.

Implementation Feusi and Partner AG, Pfaffikon Switzerland

Contractor Butti, Pfaffikon Switzerland



Besblock

*combining colour and texture*

# Case Study – Seedamm Centre in Pffikon, Switzerland

The Seedamm shopping centre was originally developed in two phases, the first building in 1973 and the second in 1985. UK architects Haskoll were appointed to produce a design concept principally for the malls and entrances, but also for a partial re-cladding of the older of the two retail blocks, where the fixings of the original concrete cladding panels had begun to fail. Haskoll's design concept emphasised the unification of the two retail blocks.

However, it was soon discovered that the concrete cladding on the later retail phase was also suffering from the same corrosion of its fixings, so the owners decided to replace the cladding on the whole centre. The owners expected from the new design that it be welcoming to visitors with a "warm and friendly appearance." This allowed Haskoll to create a design giving an external representation of the concept of showing the building as a single retail development.

Parchment split faced masonry with contrasting details in smooth Parchment masonry were selected to give the two phases a unified and slight Mediterranean look. An external metal cladding system has helped reduce the weight of cladding on the structure. The elevations is punctuated by new, glazed entrance treatments, and the stair towers have been used as vertical features to break up the horizontal lines of the overall composition and emphasise their connection to the ground.

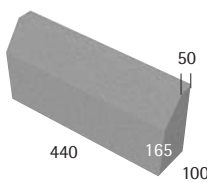
Haskoll chose Millennium Masonry because of the consistency in texture, and colour range available. They provide a contrast in scale and texture to the metal cladding system, were monolithic rather than directional, and due to the large range of "specials" available were better able to cope with the changes in direction and junctions of the existing façade. The entire refurbishment was given a time span from January to September 2005 in order that the works be completed before the Christmas season.



After

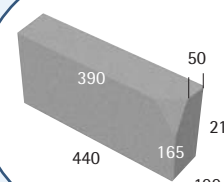
# Smooth and Shot Blast

face size 440mm x 215mm machine-cast special application blocks



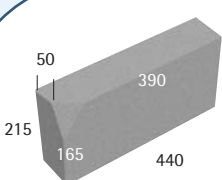
**Metric Sill/Head Window Unit**

Order Ref Smooth:	1M0
Order Ref Shot Blast:	1M0T
Unit Weight Kg	16



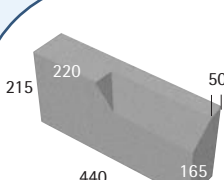
**Metric Sill/Head Window Corner L/H (Full Bond)**

Order Ref Smooth:	1M1
Order Ref Shot Blast:	1M1T
Unit Weight Kg	16



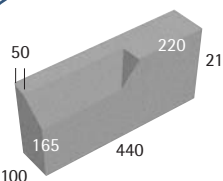
**Metric Sill / Head Window Corner R/H (Half Bond)**

Order Ref Smooth:	1M2
Order Ref Shot Blast:	1M2T
Unit Weight Kg	16



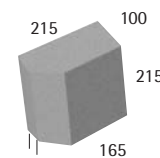
**Metric Sill / Head Window Corner R/H (Half Bond)**

Order Ref Smooth:	1M3
Order Ref Shot Blast:	1M3T
Unit Weight Kg	16



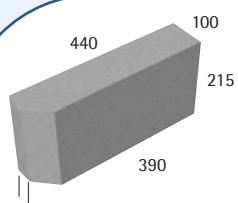
**Metric Sill / Head Window Corner L/H (Half Bond)**

Order Ref Smooth:	1M4
Order Ref Shot Blast:	1M4T
Unit Weight Kg	16



**Metric Jamb Half**

Order Ref Smooth:	1M5
Order Ref Shot Blast:	1M5T
Unit Weight Kg	8



**Metric Jamb Full**

Order Ref Smooth:	1M6
Order Ref Shot Blast:	1M6T
Unit Weight Kg	17



**Metric Plinth**

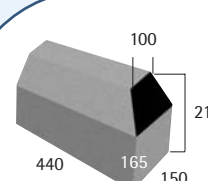
Order Ref Smooth:	15M1
Order Ref Shot Blast:	15M1T
Unit Weight Kg	23



**Metric Plinth Return Left Hand**

Order Ref Smooth:	15M2
Order Ref Shot Blast:	15M2T
Unit Weight Kg	23

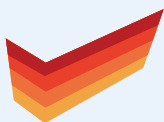
Sawn finish ■



**Metric Plinth Return Right Hand**

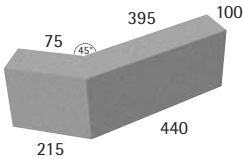
Order Ref Smooth:	15M3
Order Ref Shot Blast:	15M3T
Unit Weight Kg	23

Sawn finish ■



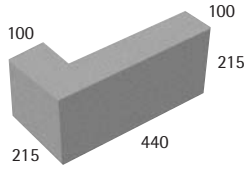
**Besblock**

*All weights quoted are approximate and may vary due to moisture content and weather conditions. All sizes shown are in mm.*



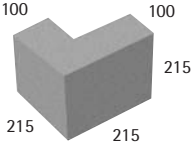
**Metric 45° Quoin**

Order Ref Smooth:	1M7
Order Ref Shot Blast:	1M7T
Unit Weight Kg	31



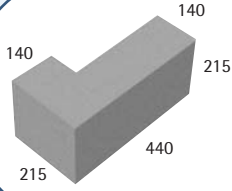
**Metric 90° Quoin Full**

Order Ref Smooth:	1M8
Order Ref Shot Blast:	1M8T
Unit Weight Kg	24



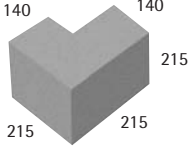
**Metric 90° Quoin Half**

Order Ref Smooth:	1M9
Order Ref Shot Blast:	1M9T
Unit Weight Kg	15



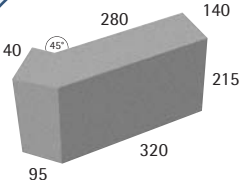
**Metric 140° Quoin Full**

Order Ref Smooth:	14M1
Order Ref Shot Blast:	14M1T
Unit Weight Kg	34



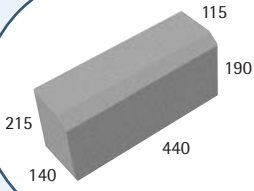
**Metric 140° Quoin Half**

Order Ref Smooth:	14M2
Order Ref Shot Blast:	14M2T
Unit Weight Kg	20



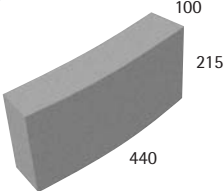
**Metric 45° Squint**

Order Ref Smooth:	14M3
Order Ref Shot Blast:	14M3T
Unit Weight Kg	28



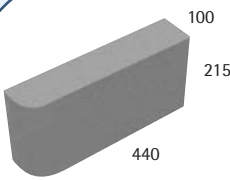
**Metric Sill / Head Window Unit**

Order Ref Smooth:	14M4
Order Ref Shot Blast:	14M4T
Unit Weight Kg	29



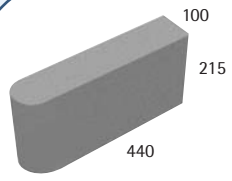
**Curve 1725mm Radius**

Order Ref Smooth:	1M10
Order Ref Shot Blast:	1M10T
Unit Weight Kg	21



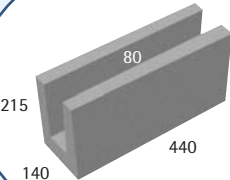
**100mm Half Bullnose Unit**

Order Ref Smooth:	1M11
Order Ref Shot Blast:	1M11T
Unit Weight Kg	20



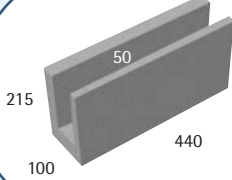
**100mm Full Bullnose Unit**

Order Ref Smooth:	1M12
Order Ref Shot Blast:	1M12T
Unit Weight Kg	20



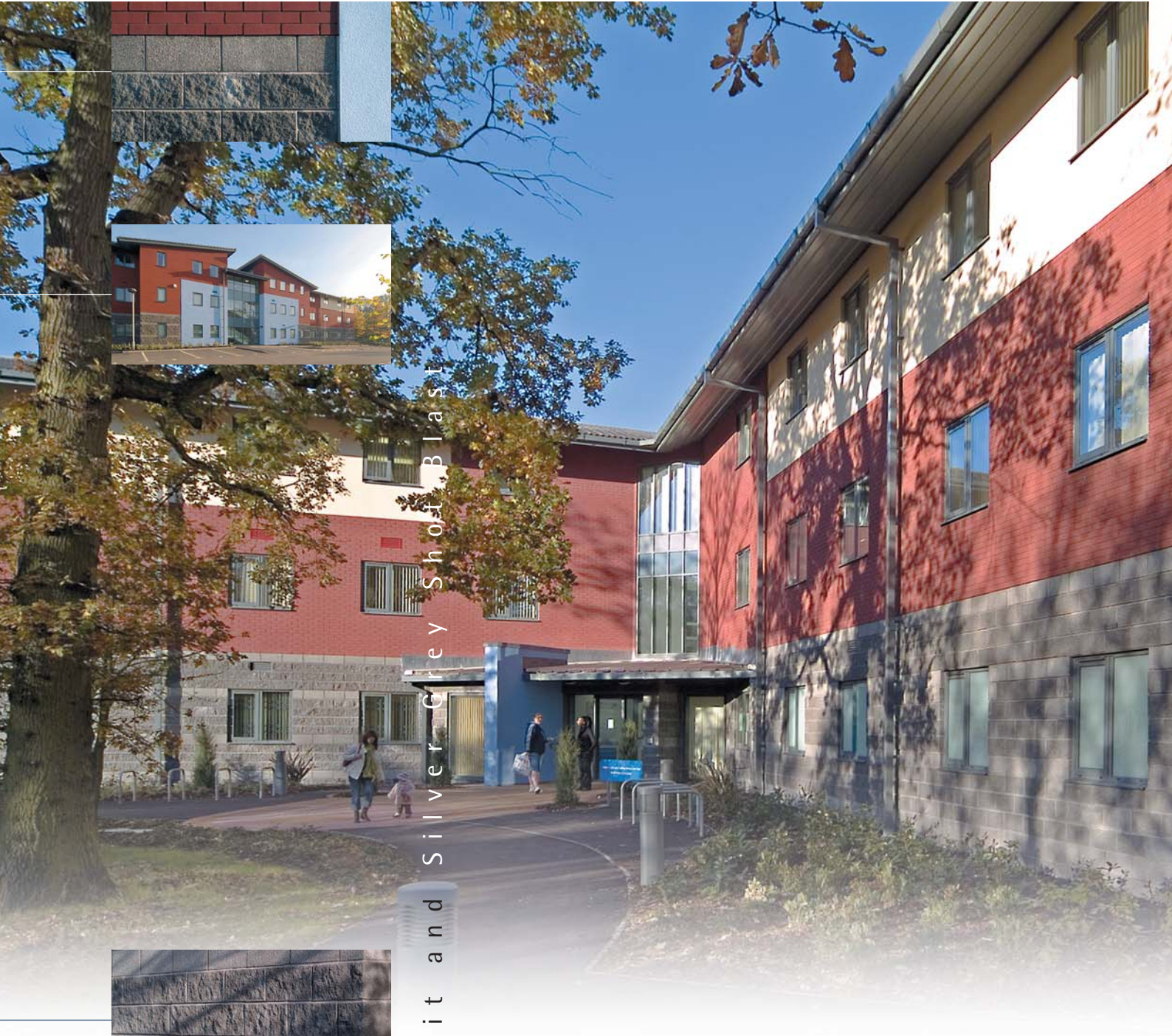
**140mm Lintel Unit**

Order Ref Smooth:	14M5
Order Ref Shot Blast:	14M5T
Unit Weight Kg	15
Laid Weight Kg/LM	25



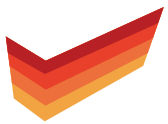
**100mm Lintel Unit**

Order Ref Smooth:	1M7
Order Ref Shot Blast:	1M7T
Unit Weight Kg	12
Laid Weight Kg/LM	25



Charcoal Split and Silver Grey Shot Blast

Project Tile Hill Health Centre, Coventry  
Architect Panton Sargent Ltd  
Contractor AMEC



**Besblock**

*aesthetically pleasing*



# Technical Information

Shell width's and percentage of holes of cellular and hollow blocks contained in this brochure

Block description	Concrete shell width (mm)	% of hole (void)
75mm Cellular	25.1	14.38
90mm Cellular	28.1	19.26
100mm Cellular	27.5	20.82
115mm Cellular	32.77	19.58
140mm Hollow	35.4	33.5
140mm Cellular	35.4	28.47
150mm Cellular	35.4	33.97
190mm Hollow	39.8	35.22
200mm Hollow	38.7	36.42
215mm Hollow	41.1	39.92
390mm x 190mm x 190mm Hollow	33	32.75
300mm x 190mm x 390mm Split	32	

*Note: the compressive strengths shown for hollow and cellular blocks in this brochure are calculated over the whole bed area (including the area of the void) as if the blocks were solid.*

## Masonry Mortars

		Increasing ability to accommodate movement			
Mortar Designation		(i)	(ii)	(iii)	(iv)
Compressive strength class		M12	M6	M4	M2
Prescribed mortars (proportion of materials by volume)	Cement: Lime: Sand with or without air entrainment	1:0 to 1/4:3	1:1/2:4 to 4 1/2	1:1:5 to 6	1:2:8 to 9
	Cement: Sand: with or without air entrainment		1:3 to 4	1:5 to 6	1:7 to 8
	Masonry: Cement: Sand		1:2 1/2 to 3 1/2	1:4 to 5	1:5 1/2 to 6 1/2
	Masonry: Cement: Sand		1:3	1:3 1/2 to 4	1:4 1/2
Compressive strength at 28 days N/mm <sup>2</sup>		12	6	4	2

# Technical Information



## Masonry Reinforcement

When using masonry blocks and facing blocks, in areas of high stress, concentrated imposed loads and possible uneven settlement, it is good practice to consider the use of reinforcement, laid in the horizontal bed joints. The reinforcement should be of sufficient length to distribute the stresses to nearby movement joints, or into adjacent block panels.

To minimize these known areas of risk, masonry reinforcement should be installed in the mortar joints. Both cellular and hollow blocks, as well as solid blocks, work equally well in conjunction with mortar bed reinforcement. There are two main areas of application:-

### Structural Applications

It has been proven by design that the use of masonry reinforcement products can enhance the load carrying capacity of masonry block walls by providing additional tensile strength. This can also result in savings of wall width and/or panel supports, particularly when considering wind loading.

### Crack Control

The introduction of masonry reinforcement in the two courses above and below openings, at the change in masonry profiles and under areas of concentrated loading will assist in the control of cracking that can occur if not considered.

## Technical Department

An important part of our success, our Technical Department is always ready to help with clients' projects. Widely experienced and highly knowledgeable, the technical team provides advice and guidance throughout the whole operation, right from the first day. Overcoming initial design problems, selecting the right product, assisting with specifications, CAD, samples, on-site guidance – these are just some of the areas in which our Technical Department can provide advice and assistance. Call them today and they will be pleased to help.

### Materials

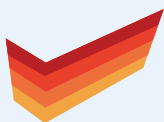
Stainless steel wire to BS 5628 – 2 or Galvanised steel wire zinc coated to BS EN 10244 – 2. Stainless shall always be specified when included in the construction of an external masonry panel or internally where the surface of the masonry block will be subject to high humidity i.e. swimming pools.

### Masonry Design

If you are in doubt about the structural design of any specified masonry panel, Besblock Ltd recommend masonry design specialists BRC Special Products, who offer a Free Design service, as well as a range of masonry reinforcement products to suit all design requirements.

To access this service, B.R.C.'s technical department can be contacted on 01785 222288. Further information on masonry reinforcement together with downloadable product brochures can be found at:- [www.brickforce.co.uk](http://www.brickforce.co.uk)

BRC Special Products has been designing and manufacturing masonry reinforcement since 1918 and has a wealth of experience to enhance your next project incorporating Besblock products.



**Besblock**

*adding unique character*

Project Brentside High School  
Architect Seymour Harris Keppie  
Contractor Kajima

# Millennium Masonry

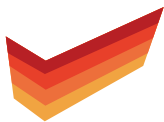
Ballidon and Charcoal Split





Cotswold Smooth and Split

Project DFS Furniture Store, Swansea  
Architect Mason Richards Partnership  
Contractor Andrew Scott Limited



**Besblock**

*a heavily textured and individual surface*

# Technical Information

Characteristic comprehensive strength of masonry,  $f_k$  in  $N/mm^2$  of walls constructed under laboratory conditions tested at an age of 28 days under axial compression.

Mortar Strength class / designation	Compressive strength of block $N/mm^2$			
	3.6	5.2	7.3	10.4
<b>Constructed with 75mm Cellular Blocks</b>				
M12 / (i)	3.5	5.0	6.8	8.8
M6 / (ii)	3.5	5.0	6.4	8.4
M4 / (iii)	3.5	5.0	6.4	8.2
M2 / (iv)	3.5	4.4	5.6	7
<b>Constructed with 90mm Cellular Blocks</b>				
M12 / (i)	3.5	5.0	6.8	8.8
M6 / (ii)	3.5	5.0	6.4	8.4
M4 / (iii)	3.5	5.0	6.4	8.2
M2 / (iv)	3.5	4.4	5.6	7
<b>Constructed with 100mm Cellular Blocks</b>				
M12 / (i)	3.5	5.0	6.8	8.8
M6 / (ii)	3.5	5.0	6.4	8.4
M4 / (iii)	3.5	5.0	6.4	8.2
M2 / (iv)	3.5	4.4	5.6	7
<b>Constructed with 115mm Cellular Blocks</b>				
M12 / (i)	3.3	4.8	6.5	8.4
M6 / (ii)	3.3	4.8	6.1	8.0
M4 / (iii)	3.3	4.8	6.1	7.8
M2 / (iv)	3.3	4.2	5.3	6.7
<b>Constructed with 140mm Cellular Blocks</b>				
M12 / (i)	2.9	4.2	5.5	6.9
M6 / (ii)	2.9	4.2	5.3	6.4
M4 / (iii)	2.9	4.2	5.1	6.1
M2 / (iv)	2.9	3.7	4.8	5.6
<b>Constructed with 150mm Cellular Blocks</b>				
M12 / (i)	2.8	4.0	5.3	6.6
M6 / (ii)	2.8	4.0	5.1	6.2
M4 / (iii)	2.8	4.0	4.9	5.9
M2 / (iv)	2.8	3.5	4.6	5.4
<b>Constructed with 190mm Hollow Blocks</b>				
M12 / (i)	2.4	3.4	4.6	5.8
M6 / (ii)	2.4	3.4	4.4	5.5
M4 / (iii)	2.4	3.4	4.3	5.2
M2 / (iv)	2.4	3.0	3.9	4.7
<b>Constructed with 200mm Hollow Blocks</b>				
M12 / (i)	2.3	3.3	4.5	5.7
M6 / (ii)	2.3	3.3	4.3	5.3
M4 / (iii)	2.3	3.3	4.2	5.1
M2 / (iv)	2.3	2.9	3.8	4.6
<b>Constructed with 215mm Hollow Blocks</b>				
M12 / (i)	2.2	3.2	4.3	5.5
M6 / (ii)	2.2	3.2	4.1	5.1
M4 / (iii)	2.2	3.2	4.0	5.0
M2 / (iv)	2.2	2.8	3.7	4.4

Mortar Strength class / designation	Compressive strength of block $N/mm^2$			
	3.6	5.2	7.3	10.4
<b>Constructed with 75mm Solid Blocks</b>				
M12 / (i)	3.5	5.0	6.8	8.8
M6 / (ii)	3.5	5.0	6.4	8.4
M4 / (iii)	3.5	5.0	6.4	8.2
M2 / (iv)	3.5	4.4	5.6	7
<b>Constructed with 90mm Solid Blocks</b>				
M12 / (i)	3.5	5.0	6.8	8.8
M6 / (ii)	3.5	5.0	6.4	8.4
M4 / (iii)	3.5	5.0	6.4	8.2
M2 / (iv)	3.5	4.4	5.6	7
<b>Constructed with 100mm Solid Blocks</b>				
M12 / (i)	3.5	5.0	6.8	8.8
M6 / (ii)	3.5	5.0	6.4	8.4
M4 / (iii)	3.5	5.0	6.4	8.2
M2 / (iv)	3.5	4.4	5.6	7
<b>Constructed with 115mm Solid Blocks</b>				
M12 / (i)	3.3	4.8	6.5	8.4
M6 / (ii)	3.3	4.8	6.1	8.0
M4 / (iii)	3.3	4.8	6.1	7.8
M2 / (iv)	3.3	4.2	5.3	6.7
<b>Constructed with 140mm Solid Blocks</b>				
M12 / (i)	2.9	4.2	5.7	7.3
M6 / (ii)	2.9	4.2	5.3	7.0
M4 / (iii)	2.9	4.2	5.3	6.8
M2 / (iv)	2.9	3.7	4.7	5.8
<b>Constructed with 150mm Solid Blocks</b>				
M12 / (i)	2.8	4.0	5.4	7.0
M6 / (ii)	2.8	4.0	5.1	6.7
M4 / (iii)	2.8	4.0	5.1	6.5
M2 / (iv)	2.8	3.5	4.5	5.6
<b>Constructed with 190mm Solid Blocks</b>				
M12 / (i)	2.4	3.4	4.7	6.1
M6 / (ii)	2.4	3.4	4.4	5.8
M4 / (iii)	2.4	3.4	4.4	5.7
M2 / (iv)	2.4	3.0	3.9	4.8
<b>Constructed with 200mm Solid Blocks</b>				
M12 / (i)	2.3	3.3	4.6	5.9
M6 / (ii)	2.3	3.3	4.3	5.6
M4 / (iii)	2.3	3.3	4.3	5.5
M2 / (iv)	2.3	2.9	3.8	4.7
<b>Constructed with 215mm Solid Blocks</b>				
M12 / (i)	2.2	3.2	4.4	5.7
M6 / (ii)	2.2	3.2	4.1	5.4
M4 / (iii)	2.2	3.2	4.1	5.3
M2 / (iv)	2.2	2.8	3.6	4.5
<b>Constructed with 140mm Solid Blocks- 140mm High</b>				
M12 / (i)	2.2	3.2	4.4	5.7
M6 / (ii)	2.2	3.2	4.1	5.4
M4 / (iii)	2.2	3.2	4.1	5.3
M2 / (iv)	2.2	2.8	3.6	4.5

# Technical Information

## Health and Safety



### Health and safety requirements when handling heavy building blocks.

HSE information sheet (Construction Sheet No 37) Offers guidance, as determined by the Construction Industry Advisory Committee (CONIAC), in the safe handling of heavy building blocks. Coniac's conclusion is that there is a high risk of injury in the single-handed repetitive manual handling of blocks heavier than 20 kg's.

This limit is intended as guidance only, the legal requirement being for the Project planners, contractors, designers and specifiers to ensure that everything reasonably practicable is done to reduce the risks from hazardous manual handling of blocks to the lowest possible level.

Enforcement action, including prohibition of work and prosecution may be undertaken by HSE where this legal requirement is not complied with. HSE Inspectors may also intervene where clients, designers or planning supervisors have not complied with their CDM duties.

Risk assessment should be undertaken by the contractor under the Manual Handling Operation Regulations where hazardous man handling of blocks is unavoidable.

## How to Specify Millennium Masonry

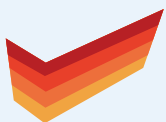
Range: \_\_\_\_\_  
Size: \_\_\_\_\_  
Description: \_\_\_\_\_  
Texture: \_\_\_\_\_  
Colour: \_\_\_\_\_  
Order Ref: \_\_\_\_\_

Manufactured by Besblock Limited  
Halesfield 21, Telford, Shropshire TF7 4NF

### Example

Range: Millennium  
Size: 440mm x 215mm x 140mm  
Description: Quoin block  
Texture: Split  
Colour: Coral  
Order Ref: 1MQ

Manufactured by Besblock Limited  
Halesfield 21, Telford, Shropshire TF7 4NF



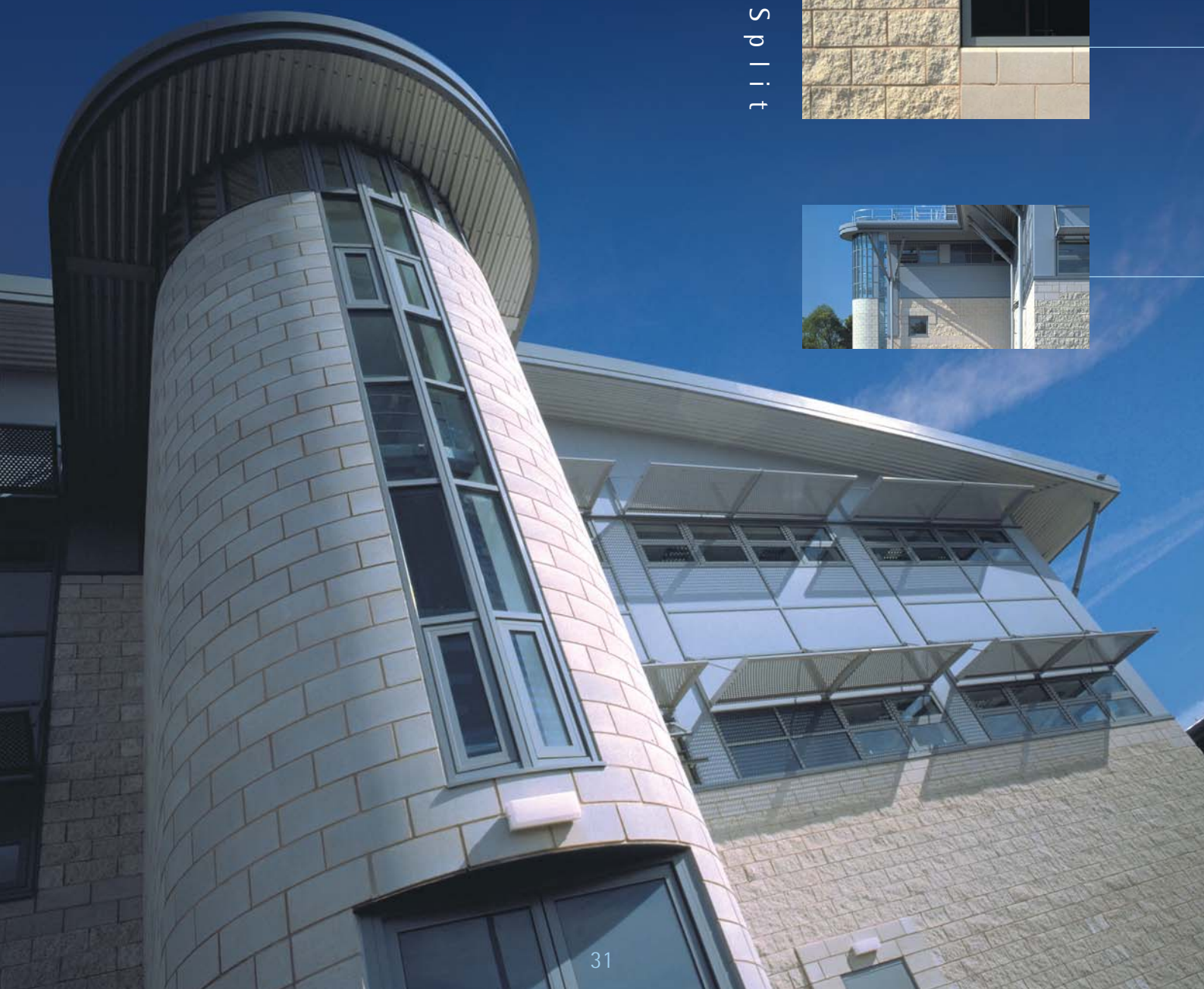
**Besblock**

*aesthetically pleasing*

Project RAF Cosford,  
Ministry of Defence  
Architect Abbey Hanson Rowe  
Contractor Tarmac Construction Limited

# Millennium Masonry

Bespoke Smooth and Split





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Project New Heart Centre,  
The Royal Wolverhampton Hospitals  
NHS Trust Heart and Lung Centre  
Architect RTKL - UK Ltd. London WC1E 7HP  
Contractor Taylor Woodrow Construction Limited

# Millennium Masonry



**Besblock**

Besblock Limited

Heslop, Halesfield Industrial Estate, Telford, Shropshire TF7 4NF  
T 01952 685000 F 01952 585224 E info@besblock.co.uk  
www.besblock.co.uk

